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Agency Impact
Determination

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Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

STATE DOCUMENTS
DEC 30 1975

December 29, 1975

Re: Grantland 11 Subdivision
Missoula County

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Courthouse, Missoula
City-County Planning Board, Missoula
Sanitarian, 301 Alder Street, Missoula
Grant Creek Ranch Corporation, Grant Creek Road, Missoula
The Missoulian, 502 North Higgins, Missoula
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Assn., Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson, Chairman,
University of Montana, Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
John P. Duke, Assistant Vice President, Land Management, Burlington
Northern, 650 Central Building, Seattle, Washington, 98104
Herb Anderson, P. O. Box 42, Raynesford, MT 59469
Mike Roach, Air Quality Bureau, Environmental Sciences Division
Don Willems, Water Quality Bureau, Environmental Sciences Division
State-Local Relations Project, Commission on Local Government,
State Capitol, Helena
Soil Conservation Service, c/o W. D. Harrison, Missoula
Sorenson & Company, Missoula
Missoula County Surveyor
Missoula County School Board

Grantland 11 Subdivision

Page 2

December 29, 1975

Enclosed is an agency impact determination that has been prepared for Grantland 11, a proposed subdivision in Missoula County.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal and solid waste disposal.

This determination defines the project and specifies those conditions under which the proposed subdivision will receive approval without the development of an environmental impact statement. This determination is intended to insure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,



Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences Division

EWC:APK:ti

Enclosure

cc: Ben Wake

Terry Carmody

Tom Ellerhoff

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

December 29, 1975

An Agency Impact Determination
for
Grantland 11
A Proposed Subdivision in Missoula County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b) (3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, R.C.M. 1947, the following agency impact determination was prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, concerning the proposed Grantland 11 Subdivision, for which a submittal has been received requesting subdivision plat approval.

Location

The proposed subdivision is situated in Missoula County approximately six miles northwest of Missoula. The tract of land is in the northeast 1/4 of the southwest 1/4 of Section 21, Township 14 North, Range 19 West, Principal Montana Meridian, (See the attached map.)

Description of the Proposed Project

In March 1975, Reed Marbut, secretary of the Grant Creek Ranch Corporation, Grant Creek Road, Missoula, Montana, submitted a proposal to subdivide 27.2 acres into 16 lots.

The largest lots will be two acres and the smallest, an acre. The total subdivided area will be 35.1 acres, with three acres dedicated for park space and 4.9 acres for roads.

The name of the subdivision is Grantland 11, and, as its name implies, it is the eleventh in a series of land developments. The ranch corporation's other subdivisions are situated north of the proposed development and west of the intersection of the Grant Creek Road and the Forest Service road which leads to the Snow Bowl ski area.

The 10 previous subdivisions are small developments, with the largest containing seven lots and the smallest, three.

Grantland 11 will be the largest subdivision and restricted to single-family residences.

The subdivision will be serviced by a public water system. Water from two wells, situated in the valley west of the development, will be pumped under the Grant Creek Road and up to a 50,000 gallon storage tank above the subdivision. Water mains will carry the water from the storage tank to the homes.

Septic tanks with subsurface drainfields will be used for sewage disposal. Soil profile descriptions, soil percolation rates and groundwater levels indicate septic tanks can be used on all of the lots.

All septic tanks will meet minimum requirements of the State Department of Health and Environmental Sciences and the Missoula County Health Department. The drainfield and septic tank locations, length of the drainfield and tile distribution lines also will comply with county and state regulations.

According to the proposed restrictive covenants, individual property owners will be responsible for solid waste disposal. Burning or burying solid wastes will be prohibited. Presently a commercial garbage collection firm serves the Grant Creek area.

Colorado Gulch, the road entering the subdivision, will vary from 110 feet to 80 feet wide, while the main road through the subdivision, Saint Vrain, will be 60 feet wide. Both roads will be constructed with adequate culverts and edge ditches to maintain existing natural runoff. The road design has been approved by the county surveyor.

Utility and telephone services are available to the subdivision and power and telephone lines will be buried.

A number of restrictive covenants, in addition to the one pertaining to solid waste, have been proposed. The covenants include restrictions on land use, building, animals, nuisances, water use, sanitary restrictions and enforcement.

Existing Environmental Conditions

The proposed development will be situated on the eastern slope of the Grant Creek Valley. The bottom land traditionally has been farmed and the hillsides used for pasture.

The slopes are grass covered at the mouth of the valley, with Interstate 90 running perpendicular to the Grant Creek Road. Traveling up the valley the grass covered slopes become brush covered, then gradually blend into pine woodlands. Further up the drainage the timber becomes dense as it leads up to Stuart, Mosquito and Point Six peaks.

The agrarian nature of the valley has changed gradually in the last 20 years. The Grant Creek Ranch subdivisions and development north of the ranch have added significantly to the change.

The corporation owns a good deal of bottom land and will continue to use this land for agricultural purposes.

Grantland subdivisions 1-10 are situated in woodlands considered to be marginal for agricultural purposes.

The soil types and percent of slope for the Grantland 11 site were determined by W. D. Harrison, a soil scientist for the Soil Conservation Service in Missoula.

Harrison divided the area into three "mapping units." The predominant unit runs through the middle of the site and comprises about 70 percent of the area. It consists of two soil types, deep gravelly clay and deep gravelly loam, which occur "in an intricate complex pattern."

The landscape is rolling with moderate slopes (8 to 15 percent), he said.

"This unit occurs on most of the subdivision area where dwellings and roads are proposed," Harrison said.

The unit which runs adjacent and parallel to the Grant Creek Road comprises about 10 percent of the land area. According to Harrison, the soils in this unit are similar to those in the first unit, except they occur on steeper slopes, 15 to 30 percent.

The last unit is situated in the upper 20 percent of the site and consists of deep, very gravelly loam soils over fractured bedrock. Harrison described this unit as being on "steep to very steep slopes (15 to 40 percent)."

Percolation tests were conducted by Sorenson & Co., a Missoula engineering consulting firm, to determine the rate of absorption for septic tank drainfields.

The tests were made on each lot and most readings averaged an absorption rate of 14 minutes per inch. The two highest readings were 40 and 34 minutes per inch.

Absorption rates are not considered unusually slow unless they are greater than 60 minutes per inch.

According to the engineering firm, test wells were drilled to a depth of 70 feet on Lots 71 and 78 during the late summer and fall of 1974 and no groundwater seepage occurred.

Well logs from the wells in the valley which will provide water for the private water systems indicate there's more than sufficient water for domestic use. A report written by the engineering firm said the wells, 65 and 75 feet deep, are capable of producing 65 gallons per minute or 93,600 gallons per day--well over the minimum requirement of 9,000 gallons per day.

The land is not within the 100-year flood plain and is not subject to avalanches, rockfalls or slides.

Several species of game animals frequent the area according to a spokesman from the State Department of Fish and Game's Missoula office. Grouse and white-tailed deer are common to the area, and during times of severe winter weather, mule deer and elk wander into the area. However, the department spokesman said the area isn't considered a prime wintering area for big game animals.

Environmental Impacts

A review of the proposed restrictive covenants for the Grantland 11 subdivision indicates the corporation is interested in developing a subdivision which will create as small an impact as possible. However, it is impossible to totally mitigate the aesthetic impact of a subdivision.

The very basic acts of creating a subdivision, such as putting in roads, septic tanks, a water system and building homes, will substantially change the nature of the area. More specifically, it will accelerate the transition of the traditional pastoral setting to a suburban setting.

The corporation's other developments are clustered at the north end of its property. The proposed development will be the first subdivision on the east slope of the valley from the junction of the Grant Creek Road and Snow Bowl road to Interstate 90.

By its very name, Grantland 11 implies there will be other developments; however, there was no mention of further development in the material submitted for review.

A check with the Missoula County Planning Office revealed the corporation does have future development plans in the area adjacent to Grantland 11, but has not drawn up a master plan. It did submit a color coded map which indicated areas of possible development, but nothing in terms of detailed plans.

Although this review does not require a master plan of the total development, such a plan proves to be helpful to both the developer and the reviewer, particularly in terms of helping the developer insure that future plans are adequate to protect human health and the environment.

The developers did work closely with the Missoula County sanitarian to make certain sewage will be properly disposed. After a review of the plans, the developers agreed to have the sanitarian check the placement of septic tanks and drainfields.

Although the covenants specify that house pets are not permitted to run at large or leave the owner's property except on a leash, the spokesman for the Department of Fish and Game was concerned about the possible increase in the dog population. Dogs harass some wildlife, such as deer, and at times catch and kill animals. Unless owners conscientiously comply with the rules, the problem will increase.

According to the Missoula planning office the addition of 16 families to the community will not place a strain on schools, law enforcement or fire protection.

Based on a random undeveloped lot in Grantland 10, the property tax for a lot in Grantland 11 will increase tax revenues from \$27.30 an acre to \$1,751.00 an acre, according to Sorenson & Co.

Adverse Impacts

The aesthetic impact of a subdivision on undeveloped land cannot be mitigated, but the developer's restrictive covenants will help control the type and source of development.

High density future development could create a number of adverse impacts if proper long range planning is not initiated by the corporation.

Irreversible and Irretrievable Commitment of Resources

The land will be permanently committed to residential use.

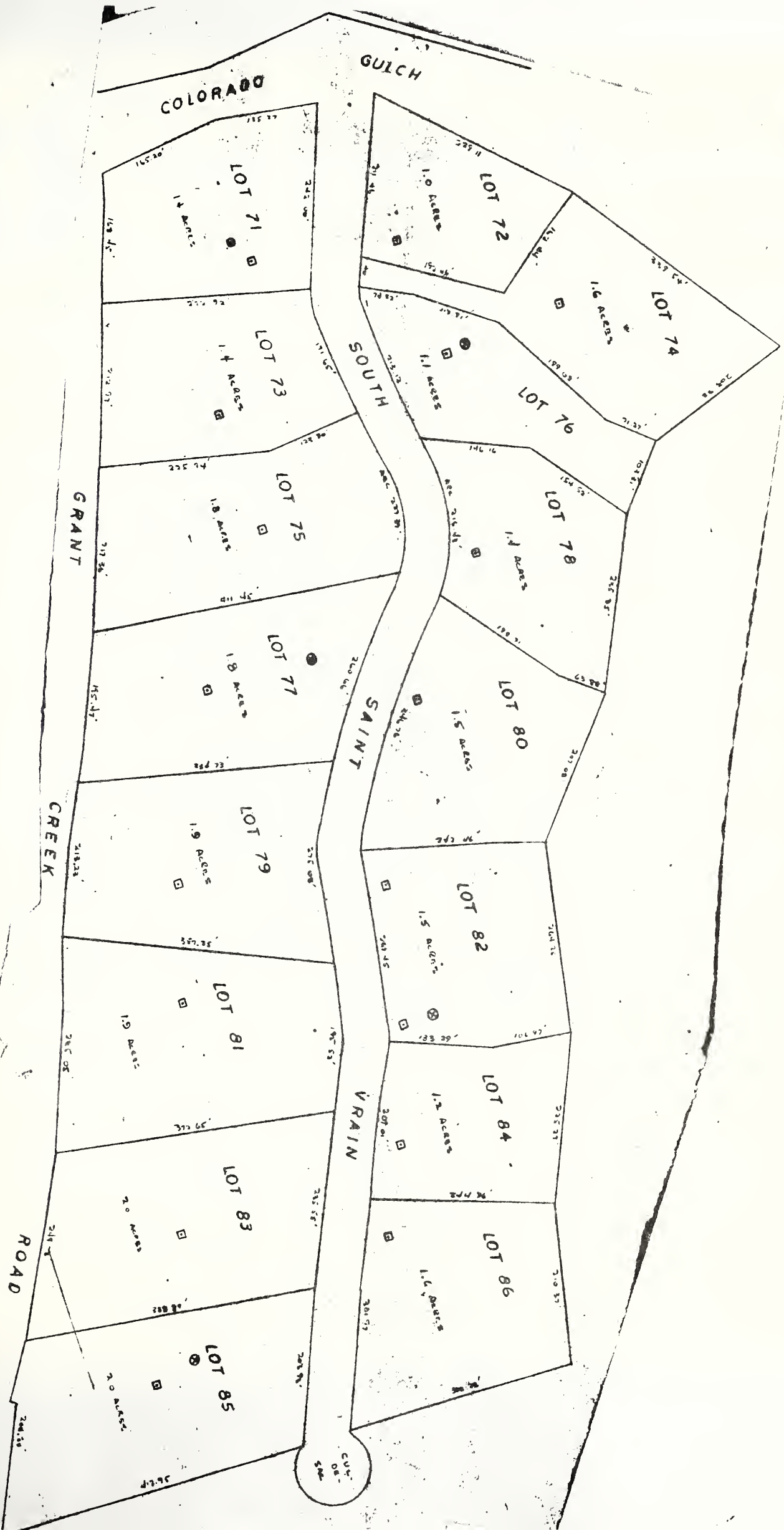
Available Alternatives

- A. Approve the subdivision plat as originally submitted.
- B. Approve the proposal subject to (1) approval of the plans for the public water system by the State's Water Quality Bureau, (2) biological tests to insure that the water meets the U.S. Public Health Service Drinking Water Standards and (3) the county sanitarian's approval of the placement of each septic tank and drainfield.
- C. Refuse to approve the plat.

Conclusion

This agency impact determination will be circulated until January 15, 1976, after which a certificate will be approved for a subdivision plat in accordance with the conditions given in alternative B.

This report was prepared by Tom Ellerhoff, with information supplied by Alfred Keppner, State Subdivision Bureau; Cliff Foy, Missoula County sanitarian; Sorenson & Company; W.D. Harrison, Soil Conservation Service; various county and state officials, and the developer.





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Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

October 24, 1975

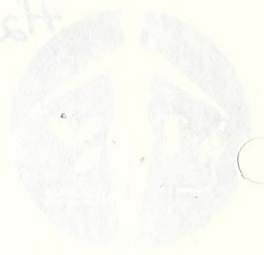
Re: Skalkaho Lakes
Ravalli County

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Courthouse, Hamilton
City-County Planning Board, Hamilton
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Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
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Doris Milner, Montana Wilderness Assn., Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson, Chairman,
University of Montana, Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
John P. Duke, Assistant Vice President, Land Management, Burlington
Northern, 650 Central Building, Seattle, Washington, 98104
Herb Anderson, P. O. Box 42, Raynesford, MT 59469
Hugh Schaefer, 206 Ben Hogan Dr., Missoula
A. E. Dionne, P. O. Box 1142, Hamilton

Enclosed is an agency impact determination that has been prepared for
Skalkaho Lakes, a proposed subdivision in Ravalli County.

Subdivision plans and specifications have been submitted to the Depart-
ment of Health and Environmental Sciences for approval of water supply,
sewage disposal, and solid waste disposal systems.

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Department of the Interior
BUREAU OF LAND MANAGEMENT

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely,

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences Division

EWC:TE:ti

Enclosure

cc: Ben Wake
Terry Carmody

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

October 24, 1975

An Agency Impact Determination for
Skalkaho Lakes Subdivision
A Proposed Subdivision in Ravalli County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504(6)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5005; and the act to control water pollution, Section 69-4801 through 69-4827, R.C.M. 1947, the following agency impact statement was prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, concerning the proposed Skalkaho Lakes subdivision, for which a submittal has been received requesting subdivision plat approval.

Location

The proposed subdivision is situated in Ravalli County approximately 4 1/2 miles southeast of Hamilton, Montana, south of the Skalkaho Road (State Highway 38). The tract of land is "T" shaped and is in the Northwest 1/4 of Section 17, Township 5 West, Range 20 West, Principal Montana Meridian. (See the attached map.)

Description of the proposed project

In April 1974 the owner of the land, A. E. Dionne, P. O. Box 1142, Hamilton, Montana, submitted a proposal to build Skalkaho Village Mobile Home Park, a 26-acre, 42-unit trailer court. A little over a year later, June 20, 1975, Dionne submitted a second proposal which he considered to be a better land use plan. The second proposal, Skalkaho Lakes, is a low density, single family residence development.

Dionne intends to subdivide 42.59 acres into 16 lots, ranging from a minimum of 1.79 acres to 5.55 acres. The total subdivided area will be 37.79 acres, with 4.80 acres dedicated for park space and 4.38 acres set aside for roads.

Two man-made lakes on the property are fed by a small stream called Cow Creek. The smaller lake, 1/4 of an acre, is in the north-central portion of the property and the larger lake, 2-3 acres, is in the south-central portion. A portion of the small lake is included in the park.

Each property owner will obtain water from individually drilled wells. According to the well logs of existing wells in the area, there should be no problem obtaining potable water.

Septic tanks with subsurface drainfields and an evapotranspiration system have been proposed to dispose of sewage. Soil profile descriptions, soil percolation rates and groundwater levels indicate septic tanks can be used on all the lots except Lot 16. The developer has agreed to install an Armon disposal system on that lot. The system eliminates much of the liquid waste through evapotranspiration.

All septic tanks will have a minimum capacity of 1,000 gallons, be constructed of concrete and shall meet minimum requirements of the State Department of Health and Environmental Sciences and the Ravalli County Health Department. The drainfield and septic tank locations, length of the drainfield and tile distribution lines shall also be in accordance with county and state regulations.

Solid waste will be picked up, for a fee, by the Bitterroot Disposal Company and hauled to the Bitterroot Valley Sanitary Landfill. This plan has been approved by the landfill operator and the refuse hauler.

The proposed road system for the subdivision has roads entering the development from the north, from the Skalkaho Highway, and the west from a private road. The road connecting the subdivision with the highway is the main thoroughfare and services Lots 5-16. Lots 1-4 in the western third of the development are serviced by the west entrance road. The lakes and creek separate the two road systems.

All roads will have 60 foot easements and gravel surfaces, and will use barrow pits and culverts to channel away surface water. A surface water problem existed along the east side of the road, between Lots 11-16, but has been solved. In accordance with the county sanitarian's recommendation, an interceptor ditch will be constructed to carry water the length of the road segment, through a culvert and into the larger of the two lakes.

Property owners will maintain the roads by means of a cooperative agreement.

Officials from power and telephone companies have reviewed the proposal, according to Dionne, and can provide utility and telephone services to the development. Power and phone lines will be buried.

Restrictive covenants have been proposed for the subdivision. The covenants include restrictions on land use and building, further subdivision of lots, animals, fences, nuisances, garbage, signs, sanitary restrictions and enforcement.

Existing Environmental Conditions

The development is on the northern slope of a hill which overlooks the Skalkaho Creek Valley. The bottom land traditionally has been farmed and the hillsides used for pastures and orchards.

Skalkaho Lakes will be situated on either side of Cow Creek and has been described as marginal pasture land, with a few trees.

The property adjacent to the subdivision is a mixture of residential and pasture land. Residential developments border the west and portions of the northern and southern boundries, with the remaining area adjacent to pasture land.

John Crawford, geological engineer for Professional Consultants, Inc., Missoula, conducted the soil profile and percolation tests for the proposed development.

According to Crawford, 10 soil profile trenches were dug with a backhoe to a depth of 10 feet. Trenches A, B, and C, along the eastern segment of the "T" revealed a moderate layer of gravelly topsoil, silty material with some clay to a depth of approximately 3 feet, with the remainder a mixture of sand, gravel, and silt. Trenches D, E and F, along the trunk of the "T" showed a moderate layer of topsoil, sandy silt to clayey silt, to a depth of about 2.5 feet and sandy silt (gravelly) to very hard clayey silt at the extreme southern end. Trenches G, H, I, and J, in the western segment of the property, revealed a moderate layer of silty loam with a mixture of gravel, cobbles, sand silt and minor clay particles about 6.5 feet thick under the topsoil.

Crawford said no groundwater seeped into the trenches during the testing which was conducted June 9, 1975.

Percolation tests showed that the rate of absorption was adequate for septic tank drainfields on all the lots, except Lot 16. However, the problem was resolved by the use of an evapotranspiration system.

Another possible pollution problem was resolved when the developer agreed to place the septic tank drainfields on Lots 1-4 on top of the hill, away from the steep slope.

Although a test well has not been drilled to determine the rate of flow and water quality, logs from surrounding wells indicate that potable water can be reached at a depth of about 80-120 feet.

The Ravalli County Planning staff reported that the size and location designated as park space is suitable, but the northern portion of the park's lake belongs to an adjacent property owner. The staff thought some arrangement should be made to either acquire the use of the remainder of the pond or fence it off to avoid trespassing problems.

Song birds and ground squirrels are the predominate wildlife on the property. According to a spokesman from the State Fish and Game Department's Missoula district office, the property is not a wintering area for big game animals, nor does it have any endangered species.

The land is not within the 100 year flood plain and is not subject to avalanches, rockfalls or slides.

Environmental Impacts

From the aesthetic standpoint, the creation of another subdivision in the area will accelerate the transition of the traditional pastoral setting to a suburban setting. However, the existence of the Bonanza Land No. 2 subdivision, residential homes and a county park, adjacent to the northwest boundary of the proposed development, established the fact that the land use of the area has been changing for the last several years.

Sewage from homes in the subdivision should not pollute surface or groundwater if the development proceeds according to previously mentioned plans and specifications.

One aspect of water quality and soil erosion which concerned the County Planning Department staff was the grazing of privately owned livestock within the subdivision.

After reviewing the plans, the county staff recommended that the covenants allow only one animal unit per lot. An animal unit is a mature horse or cow, or a cow and a calf (up to six months) or a mare and foal (up to a year old).

Large animals would present a serious problem on Lots 11-16 and Lot 4. All the lots are situated on the slopes of Cow Creek, and over grazing would accelerate soil erosion of the sandy-clay soil. Additionally, animal wastes would effect the quality of the water in the pond.

Extensive plant life in the pond indicates a high biochemical oxygen demand (B.O.D.) and nutrient level according to the staff. Added B.O.D. could result in eutricification of the lakes and loss of fish habitat.

The developer has agreed to incorporate the planning staff's suggestion in the covenants.

According to the sheriff's office, county school superintendent's office and the rural fire department, the impact of the development will not seriously effect community services. All three organizations said they could handle the increased demand.

Adverse Impacts

It is impossible to mitigate the aesthetic impact of a subdivision on undeveloped land, but the developer's restrictive covenants will help control the type and course of development.

Irreversible and Irretrievable Commitment of Resources

This land would be permanently committed to residential use.

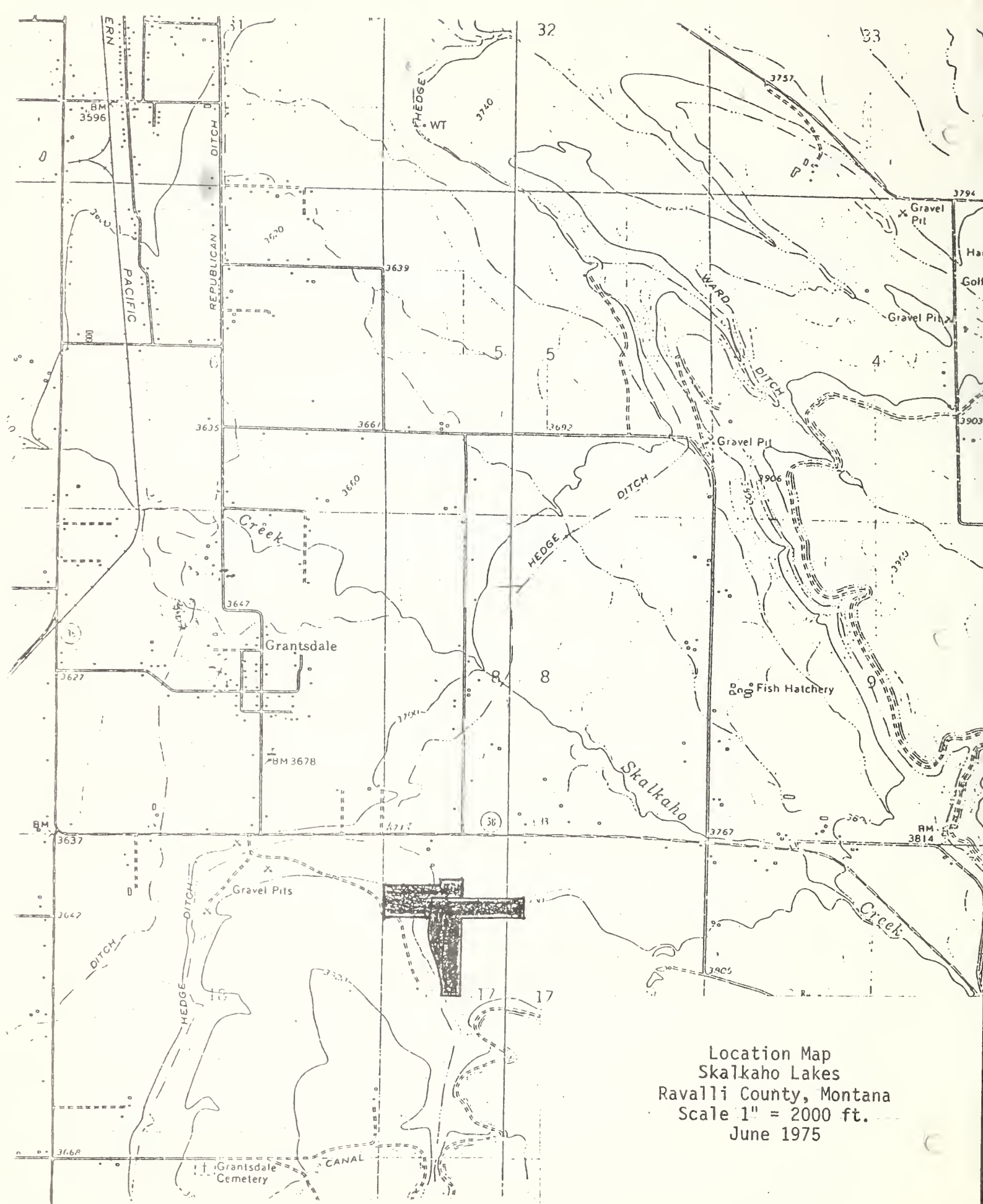
Alternatives Available to this Department

- A. Approve the subdivision plat as originally submitted.
- B. Approve the proposal subject to (1) the installation of an Armon evapotranspiration system for sewage disposal on Lot 16, (2) the construction of an interceptor ditch along the east side of the road from Lots 11-16 and (3) the placement of drainfields for Lots 1-4 on top of the hill.
- C. Refuse to approve the plat.

Conclusion

This Agency Impact Determination will be circulated for a period of 10 days, after which a certificate will be approved for a subdivision plat in accordance with the conditions given in alternative B.

This Agency Impact Determination has been prepared by Tom Ellerhoff, with information supplied by Alfred Keppner, State Subdivision Bureau; Chuck Stahl, Ravalli County sanitarian; John Crawford, geological engineer for Professional Consultants, Inc.; various county and state officials, and the developer.



Location Map
Skalkaho Lakes
Ravalli County, Montana
Scale 1" = 2000 ft.
June 1975



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Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

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October 3, 1975

Re: Fishermen's Village
Gallatin County

Mr. Phillip T. Clock, P. O. Box 729 Westminster, California, 92683
David Orbe, P.E., Morrison-Maierle, Inc., 33 E. Mendenhall,
Bozeman
Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
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Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Assn., Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson, Chairman,
University of Montana, Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
John P. Duke, Assistant Vice President, Land Management, Burlington
Northern, 650 Central Building, Seattle, Washington, 98104
Rick Graetz, Box 894, Helena
City Planning Board, City Hall, Bozeman
Gallatin County Planning Board, Courthouse, Bozeman
Bozeman Public Library, Bozeman
Gallatin County Attorney, Courthouse, Bozeman
County School Superintendent, Courthouse, Bozeman
Gallatin County Sheriff, Courthouse, Bozeman
Gallatin National Forest, Federal Building, Bozeman

Soil Conservation Service, Federal Building, Bozeman
Gallatin Canyon Study Team, Montana State University, Bozeman
Ms. Ronda Sanquist, Institute of Applied Research, 309 Hamilton Hall,
Montana State University, Bozeman
Microbiology Department, Montana State University, Bozeman
Rick Applegate and Dorothy Bradley, Box 931, Bozeman
Kenneth Baldwin, Federation of Western Outdoors Club, Box 548, Bozeman
Earl Best, Bridger Canyon Planning and Zoning Commission, Courthouse,
Bozeman
Charles Bradley, 1105 South Tracy, Bozeman
Jim DeWolfe, Bozeman Chronicle, Bozeman
Raymond Hurley, Joe Brooks Chapter, Trout Unlimited, Box 271, Livingston
Louis Moos, Sacajawea Audubon Society, 712 South 13th Avenue, Bozeman
Montana Wilderness Assn., Box 548, Bozeman
Perry Nelson, Gallatin Sportsmen's Assn., 526 North Bozeman Avenue, Bozeman
Dr. Richard Ritter, Box 1170, Bozeman
Joseph W. Sabol, Attorney, 27 North Tracy, Bozeman
Citizens Assoc. for Guided Growth, 812 South Eighth, Bozeman
Elizabeth Smith, 2311 Highland Court, Bozeman
Dr. Charles Jonkel, University of Montana, Missoula

Enclosed is an agency impact determination that has been prepared for
Fishermen's Village, a proposed subdivision in Gallatin County.

Subdivision plans and specifications have been submitted to the Depart-
ment of Health and Environmental Sciences for approval of water supply,
sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions
under which the subdivision will receive approval without the develop-
ment of an environmental impact statement. This determination is
intended to assure all interested governmental agencies and public
groups that this approval is being sought within the intent of both the
Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely,



Edward W. Casne
Subdivision Bureau
Environmental Sciences Division

EWC:AJG:ti

Enclosure

cc: Ben Wake

Terry Carmody

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

October 3, 1975

An Agency Impact Determination For
Fishermen's Village Subdivision
A Proposed Subdivision in Gallatin County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504(b)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Subdivision Bureau, concerning a proposed subdivision in Gallatin County, Montana, for which a submittal has been received requesting subdivision plat approval.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Subdivision Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

Location

Fishermen's Village Subdivision is approximately eight miles west of West Yellowstone and borders Highway U S. 191 in the SW 1/4 of Section 20, Township 13 South, Range 4 East, M.P.M., Gallatin County Montana, a portion of Homestead Entry Survey 795. Fishermen's Village Subdivision will have twenty-eight (28) single family cabins and two fly-castings ponds. The 22.146 acre site will include 1.861 acres for roads, 0.532 acres for cabin sites, .462 acres for parking and 19.291 acres as open area.

Each owner will own 1/28th undivided interest in the development. A corporation, solely owned by the property owners will be established with rates and by-laws to maintain and project the natural conditions of the property.

Topography and Soils

The subdivision lies on a gentle slope in the Denny Creek Drainage area. Soil profiles consist of slope wash with wide variations in type of soils, but generally consist of rock fragments, fine sand and silt. These soils are relatively dense due to either preconsolidation or some chemical bonding. Ground water was found to be depths of five feet to thirty-one feet. Percolation rates from 3.3 to 46.7 minutes per inch of fall were recorded by Morrison-Maierle, Inc., consulting engineers of

the project.

The existing vegetation is primarily trees with open grass areas with some willows. This land has never been flooded and is not located in the 100 year flood plain.

Water Supply and Sewage Disposal

Water will be provided in a water system from a single well. There will be three septic tanks and three drainfields for the sewage disposal system.

Wildlife

Any wildlife migratory routes through this area should have been established in the past from traffic on the adjoining highway and human activity on the bordering property.

The Montana State Department of Fish and Games states that the infringement of more people by this development will tend to continue to diminish the area's potential to furnish as suitable environment for wildlife and that this area is also definitely grizzly bear habitat and the possibility of people-bear conflicts will increase with increased people. In these situations, the bear is practically always the loser they contend.

To discourage bears from moving into the area the developer proposes that the garbage will be contained in bear proof facilities. Dogs will be constrained to eliminate the possibility of chasing wildlife in neighboring areas.

The Fish and Game Department's response also states that direct effect on the aquatic environment by this development is not foreseen.

Solid Waste Disposal

Solid waste is to be hauled to the solid waste disposal site at West Yellowstone.

Roads

Surface water will drain to roadside ditches. Cross drainage will be installed as needed to perpetuate existing drainage courses. Proposed road surfaces are to be gravel. Where possible, roadways will follow open areas to minimize tree cuttings. Roads will be twenty feet wide with maximum cuts of one foot and fills of less than one foot. Culverts will be used for small drainages, but no bridges or stream crossings are required.

Probable Environmental Impact

The project engineer states that the probable impacts of the development on both the human and existing environment should not result in any

significant consequences. If dust from the gravel road violates state air standards, he notes that this dust can be abated with oil or water. All water, sewer, telephone, and electric lines will be underground. The disturbed soil will be seeded to minimize visual impact and erosion.

Alternates

The project engineer states that the only alternate to be considered at this time would be "do nothing". Since the roads are rough graded and pond construction is almost complete, he considers this alternate not warranted esthetically.

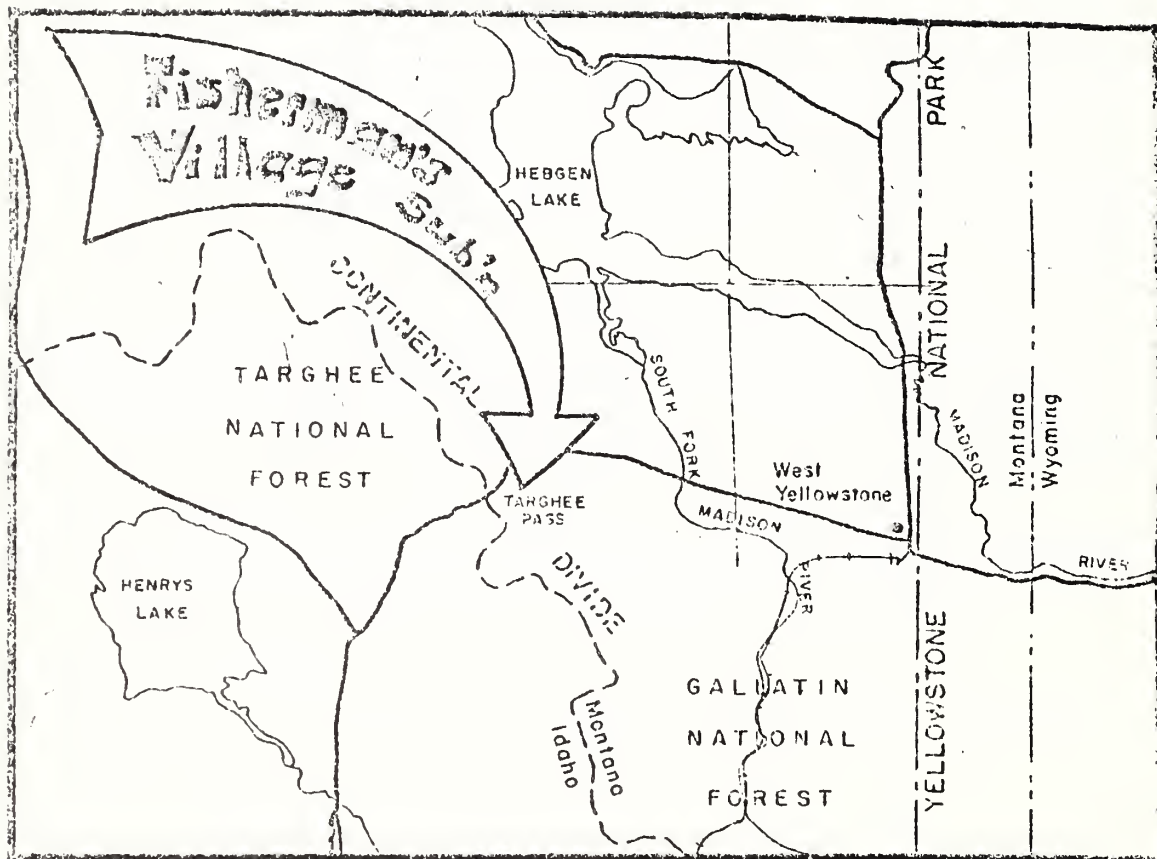
Commitment of Resources

The project engineer notes that the only irreversible or irretrievable commitment of resources are those materials used in the actual construction of the project. Under present economical conditions, he finds it doubtful that these materials would need to be reclaimed for future use. He states that the majority of the construction materials used will be timber products which are a renewable resource.

Conclusion

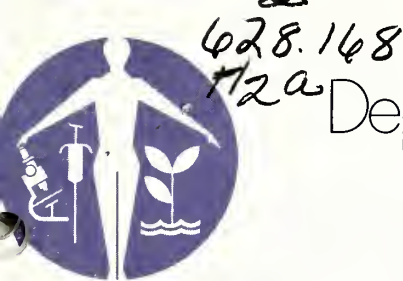
This project has received approval of a county hearing on June 3, 1975. A certificate of plat approval will be issued unless convincing response to the contrary is received by the Department within ten days after this agency impact determination is issued and required subdivision fees are received.

This agency impact determination has been prepared by Albert J. Gasvoda, Architect, Subdivision Bureau, Environmental Sciences Division, utilizing information supplied by Morrison-Maierle, Inc. and the developers.



AREA

MAP



Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

STATE HEALTH DEPT
OCT 1 1975

John S. Anderson M.D.
DIRECTOR

October 1, 1975

Re: Totem Estates Subdivision
Carbon County

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Courthouse, Red Lodge
City-County Planning Board, Box 460, Red Lodge
City-County Health Department, Courthouse, Columbus
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Assn., Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson, Chairman,
University of Montana, Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
Rick Graetz, Box 894, Helena
Soil Conservation Service, Box J, Joliet
Mueller Engineering, Billings
G. Kenneth Allen, 242 First Avenue North, Billings

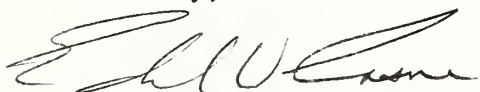
Enclosed is an agency impact determination that has been prepared for Totem Estates, a proposed subdivision in Carbon County, Montana. This is being sent to you for your information and comments.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will received approval without the development of an environmental impact statement.

This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within this intent of both the Montana Environmental Policy Act and the Montana Subdivision Laws.

Sincerely,

A handwritten signature in dark ink, appearing to read 'E. W. Casne', written in a cursive style.

Edward W. Casne, Chief
Subdivision Bureau
Environmental Sciences Division

EWC:APK:ti

Enclosure

cc: Ben Wake
Terry Carmody
Tom Ellerhoff

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

October 1, 1975

Agency Impact Determination
for
TOTEM ESTATES

a proposed subdivision in Carbon County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504(6)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5005; and the act to control water pollution, Section 69-4801 through 69-4827, R.C.M. 1947, the following agency impact statement was prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, concerning the proposed Totem Estates subdivision, for which a submittal has been received requesting subdivision plat approval.

Location

This project is located approximately 1.1 miles north of the city of Red Lodge. It is situated in the S1/2 of the S1/2, Section 15, Township 7 South, Range 20 East, M.P.M. The right-of-way of U. S. Highway 212 forms the eastern boundary of the proposed development (see attached maps).

Description of proposed project

The owners, G. Kenneth Allen and R. W. Wilson, intend to divide 45.981 acres into 17 residential lots and one 3.971 acre park. Lot sizes range from 2.225 acres to 4.605 acres.

Water supply would be through the use of individual wells. No difficulty in obtaining such a water supply has been reported from this area.

Septic tanks with subsurface drainfields and evapotranspiration systems are proposed for sewage disposal systems. Soil profile descriptions, soil percolation rates and groundwater levels indicate that the property is satisfactory for this purpose except Lots 1 through 5, Block 2. The suitability or desirability of utilizing such systems will be discussed later in this statement.

It is anticipated to utilize the approved Red Lodge sanitary landfill for solid waste disposal. Acceptance of this plan by the landfill operator and the written commitment of a refuse hauler with a MRC registration number is forthcoming.

The roads in the proposed subdivision have been constructed. They are gravel surfaced using surface drainage, barrow pits and culverts for disposing of surface water. A problem existed on Totem Drive between

Lots 1 and 2 of Block 3 and Lots 3, 4, and 5 of Block 2. Due to saturated conditions caused by springs flowing or oozing from the west valley wall, the road was impassible most of the year. Plans to alleviate this intolerable condition by diverting the flow of water that renders the road impassible into the barrow pit should correct the problem.

Power lines run through the lower half of the proposed subdivision and telephone lines parallel the highway adjoining the east end of the property. There are no immediate plans to replace these utility lines with underground cables.

To date no restrictive covenants have been formally adopted but it is anticipated that no trailer houses will be allowed. There may also be restrictions on type of construction and a minimum area requirement.

Existing Environmental Conditions

The proposed subdivision is located along the valley of Rock Creek. The valley is bounded by steep valley walls and high terrace bench areas. As noted on the attached location map the eastern most portion is situated on alluvial valley fill. The soil developed over this material is classified as Charlos loam by the Soil Conservation Service. Ten foot test holes were dug by Mueller Engineering, Inc. in this part of the development. They classified the soil as follows:

<u>Depth in Feet</u>	<u>Unified Classification</u>
0-1	Topsoil
1-3	(CL) low plastic clay
3-10	(GW) Well graded sands and gravels

Percolation rates were reported to range from 36 minutes per inch to 59 minutes per inch.

The western half of the proposed subdivision is underlain by coarse sands and gravels which lie over the relatively impervious bedded shales and sandstones of the Fort Union Formation. This formation dips to the northeast into the valley of Rock Creek. The soils that have developed on this remnant terrace are classed by the Soil Conservation Service as Charlos loam and described as follows by Mueller Engineering, Inc.;

<u>Depth in Feet</u>	<u>Unified Classification</u>
0-1	Topsoil
1-5	(CL) low plastic clay
5-10	(GW) well graded sands and gravels

Percolation rates were reported to range from 21 minutes per inch to 53 minutes per inch. The Soil Conservation Service prepared a report concerning the Rock Creek Valley. The following paragraph is taken from that report:

"Sands and gravels in the terrace bench absorb water rapidly. This supply of water flows through the gravels to the shale contact and follows toward the valley. At the valley slope the flow is entrapped by slope wash clay deposits along the steep slope. Because of this restriction of flow, water begins to form an underground reservoir into the terrace area. As the reservoir enlarges, high pressures are exerted on the slope soils. Where the pressure exceeds the ability of these soils to hold back the water, a slide or mud flow develops at the weakest location. The slide relieves the pressure from the underground water source for a short period of time. As the pressures again increase, new slides or mud flows develop. Sources of water to the bench area come from natural precipitation in the form of rain and snow, seepage from irrigation canals and excess amounts of irrigation water applied to the bench area."

In the west valley wall area between the terrace and the alluvial fill this flow condition is in evidence. This was the cause of the problem with Totem Drive.

It is doubtful whether drainfields on the edge of the terrace area would be advisable. There exists the probability of contaminating water that flows from the west valley wall and aggravating the slump condition. Therefore, only sewage disposal systems without an on-site discharge such as an evapotranspiration would be considered.

The water flowing from the west valley well has caused extremely wet conditions on lots 1,2,3,4, and 5 of Block 2 rendering them unsuitable for residential development.

This property has been used as pasture for livestock which has limited its use by wildlife. Grasses constitute the dominant vegetation.

Environmental Impacts

As noted previously there should be no pollution of the groundwater resource if sewage disposal systems on the edge of the terrace do not have an on-site discharge.

There should be little if any impact on wildlife species although the cumulative impact of all the subdivisions in the area probably is significant. To date there has been no program initiated to attempt to quantify this cumulative impact.

According to the Carbon County Sheriff:

"The proposed subdivision, Totem Estates, will not pose any problems to law enforcement in Carbon County. Its close proximity is readily accessible to the officers in the Red Lodge area as it's only two miles north and passed frequently."

Fire protection would be through a rural volunteer fire district.

The Department of Highways states:

"We see no problems with the proposed approaches to this subdivision as they will affect U. S. Highway #212. The sight distances appear adequate at both locations.

We would request that access to this subdivision be limited to the approaches shown and that access to Lot 1, Block 2 and Lots 1 and 2, Block 1 be from the interior road system of the subdivision."

The impact on the schools would depend on the number of children, which in turn would depend on the number and age of full-time residents. Elsewhere in Montana, research by the office of the State Superintendent of Public Instruction has shown that young families new to the state, such as in the Colstrip area, average 8/10ths child per family. At this rate, about 14 children might eventually come to school from this subdivision. However, it seems likely that many of the land buyers would be seasonal residents who would not send children to school in Red Lodge.

The Carbon County Superintendent of Schools states that the increase in the number of students that the proposed subdivision would cause would not present a burden to the school system.

Present taxes on this property are \$539.76. An individual lot owner would be assessed by the county according to the number of acres and the improvements that are built on the land. The evaluation would vary considerably depending on whether a seasonal cabin or permanent residence is built. Therefore, calculation of future tax revenues at this time would be purely a matter of speculation.

As with any residential subdivision, a visual impact would certainly result if the property were developed. A pastoral landscape would be altered to a suburban landscape, the severity of which is purely speculation and the desirability a matter of personal aesthetic values.

Adverse Impacts

Adverse aesthetic impacts of this development could be minimized by architectural control and landscaping. However, 46 acres of land would be removed from agricultural production. The land would be irrevocably divided into a multiplicity of ownerships.

Alternatives Available to this Department

1. Approve the subdivision plat as originally submitted. For reasons contained in this statement the department cannot exercise this alternative.
2. Approve certain lots that are suitable with respect to water supply and sewage disposal systems. Lots 1 and 2 of Block 1, Lots 8

through 14 of Block 2 are suitable for conventional subsurface sewage disposal systems. Lots 1 and 2 of Block 3 and Lots 6 and 7 of Block 2 are suitable for an evapotranspiration system. Lots 1 through 5 of Block 2 are unsuitable for individual sewage disposal systems in light of criteria required by MAC 16-2.14(10)-S14340, Section 69-5001 through 69-5005, RCM, 1947 and Section 69-4801 through 69-4827 RCM 1947.

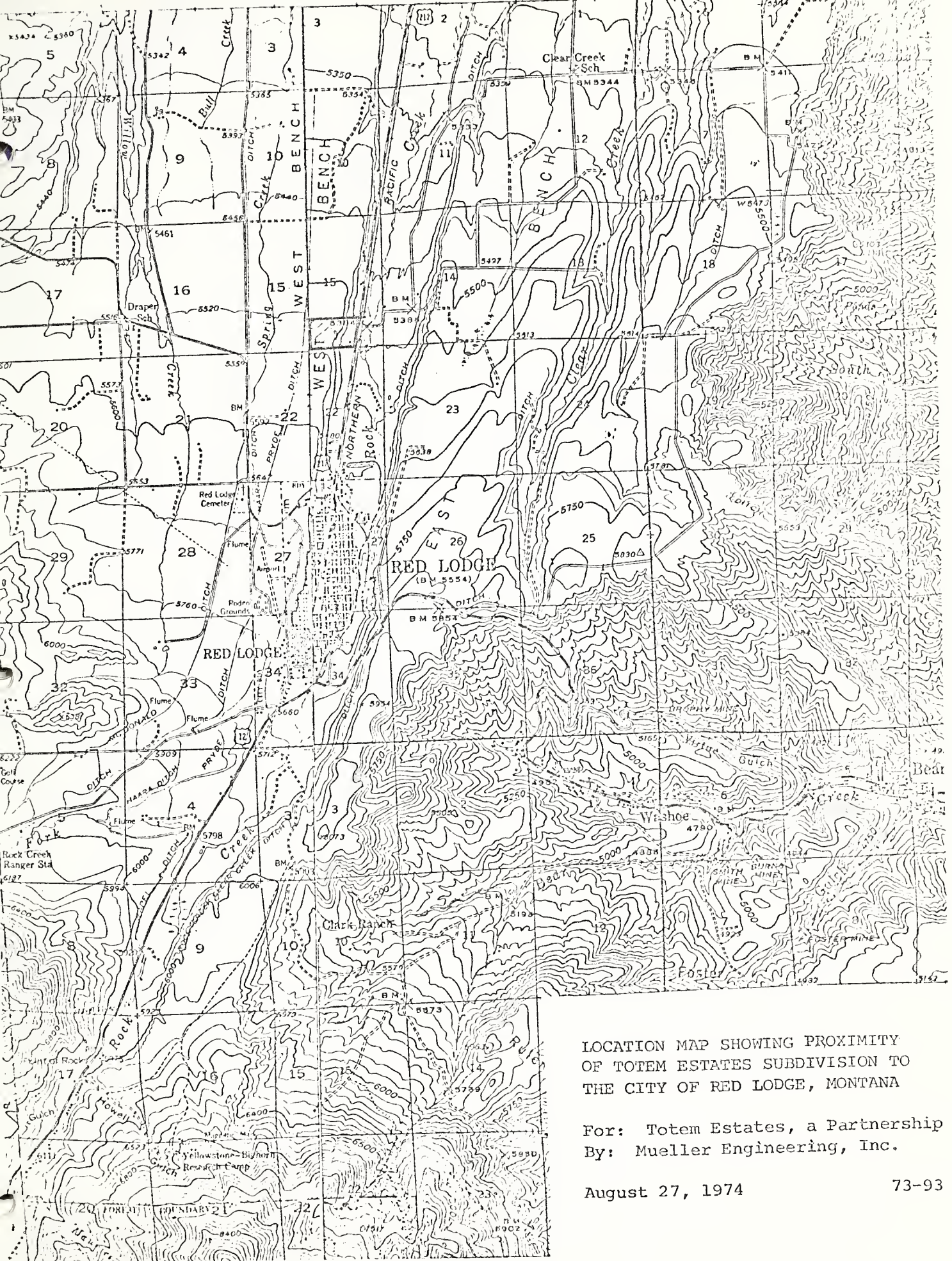
3. Refuse to approve the plat. The department would find it difficult to justify this alternative based on the information currently available.

Irreversible and Irretrievable Commitment of Resources

This land would be permanently committed to residential use.

This Agency Impact Determination will be circulated for a period of ten (10) days at which time a certificate of subdivision plat approval will be issued in accordance with the conditions given in alternate 2 unless convincing evidence to the contrary is submitted.

This Agency Impact Determination has been prepared by Alfred P. Keppner with information supplied by Mueller Engineering, Soil Conservation Service, various local and county officials and the developer.



LOCATION MAP SHOWING PROXIMITY
OF TOTEM ESTATES SUBDIVISION TO
THE CITY OF RED LODGE, MONTANA

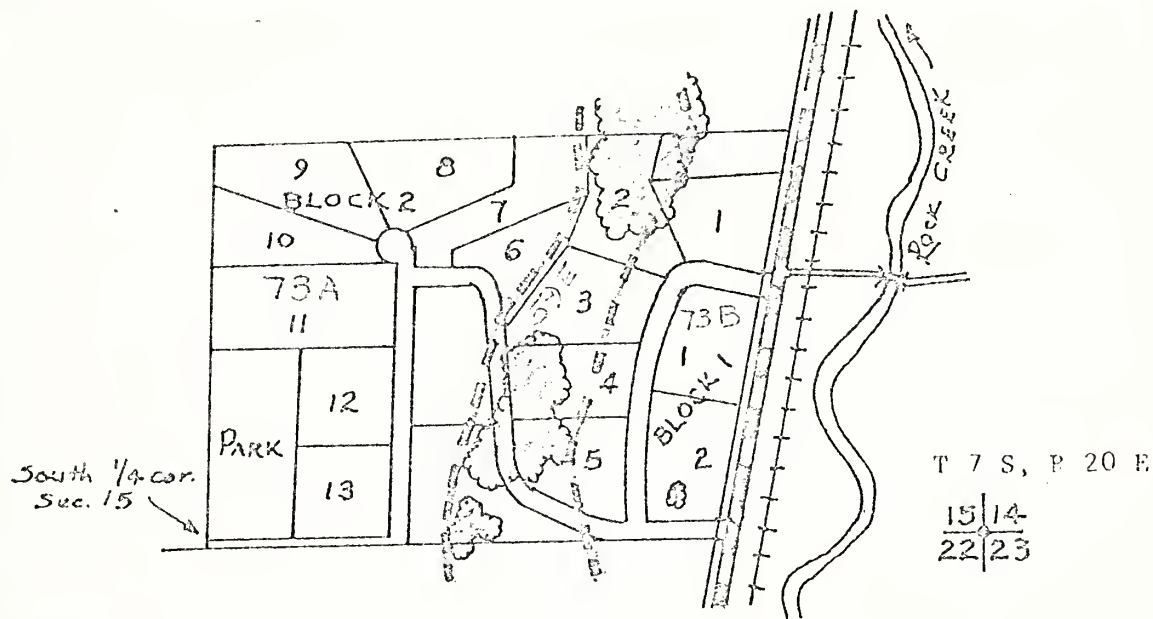
For: Totem Estates, a Partnership
By: Mueller Engineering, Inc.

August 27, 1974

73-93

SOIL

Carbon
County



T 7 S, R 20 E

15	14
22	23



Soil boundary



Brush & Trees

Red Lodge
1 mi.



628.168
H2a

Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

RE: Homestead Subdivision, First Filing
Yellowstone County, Montana

SEP 24 1975

September 16, 1975

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Yellowstone County Courthouse, Billings
City-County Planning Board, Yellowstone County Courthouse, Billings
City-County Health Department, Room 205 Courthouse, Billings
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South 6th, Livingston
Mrs. Winifred Lucky, 420 So. 6th, Livingston
Mary Lee Reese, League of Women Voters, 29 S. Alta, Helena
Doris Milner, Montana Wilderness Assn., Route #1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson, Chairman,
University of Montana, Missoula
Larry Uman, Environmental Studies Department, University of Montana, Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
Bureau of Land Management, Federal Building, 316 No. 26th St., Billings
Bureau of Reclamation, P. O. Box 2553, Billings
Bureau of Sport Fisheries & Wildlife, 711 Central Ave., Billings
Oscar Harmon, 1804 Lake Elmo Road, Billings
Kenneth Mitchell, First Congregational Church, 310 No. 27th St., Billings
Mrs. Rita Sheehy, 1041 Poly Drive, Billings
Trout Unlimited, Box 1534, Billings
Yellowstone Development Council, Room 202, Courthouse, Billings
Northern Plains Resource Council, Stapleton Building, Billings
General - Kimble Properties, Petroleum Building, Box 516, Billings
HKM Consultants, 937 Grand, Billings

Enclosed is an agency impact determination that has been prepared for Homestead First Filing, a proposed subdivision in Yellowstone County.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ed W. Casne", written in a cursive style.

Edward W. Casne
Subdivision Bureau
Environmental Sciences Division

EWC: APK:ds

Enclosure

cc: Ben Wake

Terry Carmody

Tom Ellerhoff

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

An Agency Impact Determination For
HOMESTEAD FIRST FILING
A Proposed Subdivision in Yellowstone County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, concerning a proposed subdivision in Yellowstone County, Montana for which a submittal has been received requesting removal of sanitary restrictions.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Subdivision Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

This A.I.D. covers 14 single-family residential lots (10.15 acres in the first filing) of Homestead Subdivision. The subdivision is located approximately 4 miles north of Billings, Montana, in the SE¼ Section 2 and NE¼ Section 11, T. 1 N., R. 26 E.

Water supply will be provided by individual wells. Wastewater treatment and disposal will be accomplished through individual septic tank drainfield systems. The maximum and minimum size of the 12 lots concerned in this report are 58,348 and 20,371 square feet, respectively which met minimum lot size requirements at the time the plat was filed.

GEOLOGY

The geological formation of main interest in the study area is the Judith River Formation of Cretaceous Age. This unit has a reported maximum thickness of 600 feet in the area. The Judith River Formation is reported by the U. S. Geological Survey to consist of alternating beds of yellow to brown sandstone and dark gray shale 1/ 2/. The Judith River Formation outcrops in Lot 4 of Block 6 and Lots 4,5,6,7,8 and 9 of massive to locally layered, fine to medium grained, buff to gray colored sandstone. Strike of the outcrop in the above lots trends N 77° W with the dip ranging between 10° and 13° N.E. Test holes made for this report indicated sandstone and claystone of the Judith River Formation to be mantled by very fine sandy clay and clayey sand 3.6 feet deep and greater throughout potential building sites in the 14 lot area. Three soil test holes were drilled by hand auger within the First Filing. One hole was drilled in Lot 4 of Block 6, and one each in Lots 3 and 7 of Block 7. Depths to bedrock at these sites varied from 3.6 feet in Lot 4 of Block 6 to 7.6 feet in Lot 7 of Block 7. Auger holes made for soil and percolation testing purposes throughout the remainder of the First Filing indicated that shallower soils (2.0 to 3.0 feet thick) are present only in parts of Lots 3 and 4 of Block 6. Depth to bedrock was found to be greater than 4.0 feet at potential drainfield sites in the remainder of the First Filing.

GROUNDWATER

Groundwater was not encountered in any of the test holes previously described. Examination of available well logs in the vicinity of the First Filing indicated that the average year-round depth to groundwater at the site would be approximately 100 feet.

SOILS

Soils within the First Filing were reported by the Soil Conservation Service as being deep, well-drained, nearly level to strongly sloping calcareous loam. The above soils occur adjacent to the sandstone outcrops previously described 3/. Descriptions of the soils encountered within the 14 lots concur with the Soil Conservation Service Soil Survey. Percolation tests were run on each of the lots covered in this report. Percolation rates in the First Filing range from 7 to 50 minutes/inch. Slopes of lots in the report area range from 0 to 15 percent depending on the direction of measurement.

WATER SUPPLY

Water will be supplied by individual wells tapping sandstone units of the Judith River Formation. Available well logs on file with the Montana Bureau of Mines and Geology as of June 1975, indicate drilling depths for adequate supply in the First Filing would be between 150 and 200 feet below the land surface depending on

the location in the subdivision. Exhibit 8 which is a log of a well drilled in the Third Filing of Homestead Subdivision, indicated that one of the sandstone aquifers in the report area could be approximately 57 feet thick and have a specific capacity on the order of 0.38 gpm/ft. of drawdown. The sandstone unit tapped by the well described above was bailed by the driller for approximately one hour at an estimated rate of 15 gallons per minute and resulted in a total draw-down of 40 feet (100 feet below land surface) at the end of this period. Static water level before bailing was reported to be 60 feet below the land surface. Local well drillers have reported that their experience has shown that drilling depths and yields in the vicinity of the First Filing have been as great as 300 feet with the yields ranging between 10 and 15 gpm. The chemical results of an analysis of water taken from a well located in Block 7, Lot 9 of Homestead Third Filing indicated water meets U. S. Public Service drinking water standards.

WASTEWATER DISPOSAL

Wastewater disposal will be by septic tank-drainfield systems. Sewers from the houses to the septic tanks will be a minimum of 4 inches in diameter and have a minimum slope of 3 percent. Minimum capacity of the septic tanks will be 1,000 gallons. Disposal of septic tank effluent will be by drainfield. The developer or property owner could use the percolation test results of this investigation to size a drainfield for a particular lot. The property owner or developer would be encouraged to conduct a minimum of six percolation tests at the site of each proposed drainfield to accurately determine percolation rates at that particular location. Lots 3 and 4 of Block 6 would utilize an evapotranspiration system because of the shallow depths to the Judith River Formation.

SOLID WASTE COLLECTION AND DISPOSAL

Each property owner will be responsible for the collection and disposal of their own solid waste in a State approved sanitary landfill.

At least three private refuse hauling contractors are available for solid waste collection in Yellowstone County. Disposal of refuse by these haulers is in the Billings sanitary landfill. The fee paid by the property owner to the hauler includes sanitary landfill disposal costs. The haulers are responsible for landfill disposal of the refuse. The local haulers indicate there is no problem as far as disposal is concerned, as they pay the landfill on a load basis.

Each property owner will be responsible for contracting their own septic tank pumping. Disposal of sludge will be in a State and County approved site within Yellowstone County.

Homestead First Filing is surrounded by residential developments. Results of this investigation indicate that the proposed development will have no adverse effects on surface or groundwater in the area and that soils have sufficient permeability for disposal of wastewater. The primary effect of this development is the permanent commitment of the land to residential development. A secondary effect would be suburban congestion resulting from development.

UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

Noise and air pollution from blowing dust will be unavoidable during the construction and development of Homestead First Filing.

ALTERNATIVES

The main alternative would be no development as most of the area in the vicinity of the First Filing has already been developed or subdivided. The above, plus the fact the area encompassed by the First Filing has been zoned R-9600 for single family residences, leave development of the 14 lot area as the most realistic alternative.

RELATIONSHIP BETWEEN SHORT-TERM USE AND LONG-TERM PRODUCTIVITY

In the long-term, the effects on the environment will be minimized by the investigations involved in the development of this project. Long-term effects on the environment will even be less as the development of the Billings Heights area will eventually require a community sewer and centrally located wastewater treatment system for all of the area including the First Filing of Homestead Subdivision.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This land would be permanently committed to residential use and divide the land into a multiplicity of ownerships.

This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Subdivision Bureau, Environmental Sciences Division, utilizing information supplied by Hurlbut, Kersich and McCullough and the developer

REFERENCES

1. Hall, G.M., and C. S. Howard, 1929, Groundwater In Yellowstone and Treasure Counties, U. S. Geological Survey Water Supply Paper, 599.
2. Gosling, Arthur W. and Emil F. Pashley, Jr., 1973, Water Resources of the Yellowstone River Valley, Billings to Park City, Montana, U. S. Geological Survey Hydrologic Investigations Atlas, HA-454.
3. Soil Survey of Yellowstone County, Montana, March 1972, United States Department of Agriculture, Soil Conservation Service.
4. Manual of Septic Tank Practice, 1967, Public Health Service Publication No. 526, U. S. Department of Health, Education and Welfare, Public Health Service, Cincinnati, Ohio.





Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601

June 17, 1975

John S. Anderson M.D.
DIRECTOR

U.S. DOCUMENTS COLLECTION
MONTANA STATE LIBRARY

JUN 26 1975

Re: Homestake Ranch,
Cascade County, Montana

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Montana Outdoors, c/o Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Superintendent of Public Instruction, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Courthouse, Great Falls
City-County Planning Board, Civic Center, Great Falls
City-County Health Department, 1130 17th Avenue South, Great Falls
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Association, Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University,
Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson,
University of Montana, Missoula
Larry Uman, Environmental Studies Department, University of Montana,
Missoula
Student Environmental Research Center, University of Montana, Room 212,
Venture Center, Missoula
Rick Graetz, Box 894, Helena
Phil Korell, Architect, 600 25th Street North, Great Falls
Superintendent, Great Falls Public Schools, Box 2428, Great Falls
Superintendent of Schools, Courthouse, Great Falls
Dave Roehm, Prairie Nest Ranch, Highway Star Route, Great Falls
Northern Testing Laboratory, 528 Smelter Avenue, Great Falls
Norman L. Newhall, III, Scott, Linnell, Neill & Newhall, Montana
Building, Great Falls
Donald Henen, 4033 6th Avenue South, Great Falls
Drapes Engineering, Eklund Building, Great Falls

Enclosed is an agency impact determination that has been prepared for Homestake Ranch, a proposed subdivision in Cascade County, Montana.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,



D. G. Willems, P.E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:sh

Enclosure

cc: Mr. Wake
Mr. Carmody

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

June 17, 1975

An Agency Impact Determination For

HOMESTAKE RANCH
A Proposed Subdivision in Cascade County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning a proposed subdivision in Cascade County, Montana, for which a request has been received requesting subdivision plat approval.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

Location

The proposed development is located approximately eight miles east of Great Falls on the Highway in the North 1/2 of Section 10, Township 20 North, Range 5 East, M.P.M. Homestake Ranch encompasses 129.97 acres divided into 19 one-acre circular lots. The lots are joined by common property which is to be held by a lotowners' association. Each lot would be used for a single-family residence only.

Box Elder Creek flows through the property in a north-south direction. There are three embankment ponds on the property to be used for recreational purposes. It is anticipated that water will be present the year-round. The final plat has relocated all lots out of the designated 100-year flood plain, and all stream crossings have been eliminated.

The 129 acres have been used for grazing with a small amount of hayland. Only a relatively small area of the 19 residential lots would project onto the hayland.

Water Supply

Individual drilled wells would be used as a water supply. A 285-foot deep well exists on the property yielding 50 gallons

per minute. Biological and chemical laboratory tests indicate the water to be biologically safe for human consumption and of good chemical quality. The existence of this well and the results of the laboratory tests are deemed adequate evidence that a water supply sufficient in terms of quality, quantity and dependability is available to assure an adequate supply.

Sewage Disposal

Soils on the proposed subdivision are the Pendroy-Marias Association formed from glacial lake deposits. These are generally classed LL by the unified classification system. Since they have a low hydraulic conductivity, the use of sub-surface drainfields is questionable. Therefore, the use of evapotranspiration systems is proposed.

Solid Waste Disposal

The property is in the Cascade County solid waste district and each homeowner has the right to dispose of his solid waste at an approved site. The nearest landfill is in Sandcoulee. There is a compulsory charge of \$18 per year to be paid to Cascade County by each homeowner.

Services

Electrical power supply and telephone service lines are to be underground. No natural gas is available. Fire protection is from the Belt Rural Fire District, and police protection will be by the Cascade County Sheriff's Department. Ambulance service is available from Bicsak Ambulance Service. The development is in the Belt elementary school district and the Great Falls high school district.

Environmental Assessment

The primary environmental impacts would be those associated with the conversion of agricultural land to residential. However, the hayland will be preserved as most of the development would be on the native range. Visual impacts would be minimized by the restrictive covenants, but there would be a change of a rural landscape to a suburban landscape.

There might be a dust problem from gravel roads in the area, but this could be corrected by residents of the proposed subdivision through the homeowners' association.

If the residents of the subdivision came from outside Montana, they would cause an additional consumption of electrical energy.

Since this is not a development designed to appeal to the second-home market, many of the social and environmental impacts will be minimized since residents would need a homesite some other place if not at Homestake Ranch.

Alternatives Available to this Department

- (a) Approve the subdivision plat as requested.
- (b) Deny approval of the subdivision plat.
- (c) Approve the subdivision plat under certain conditions.

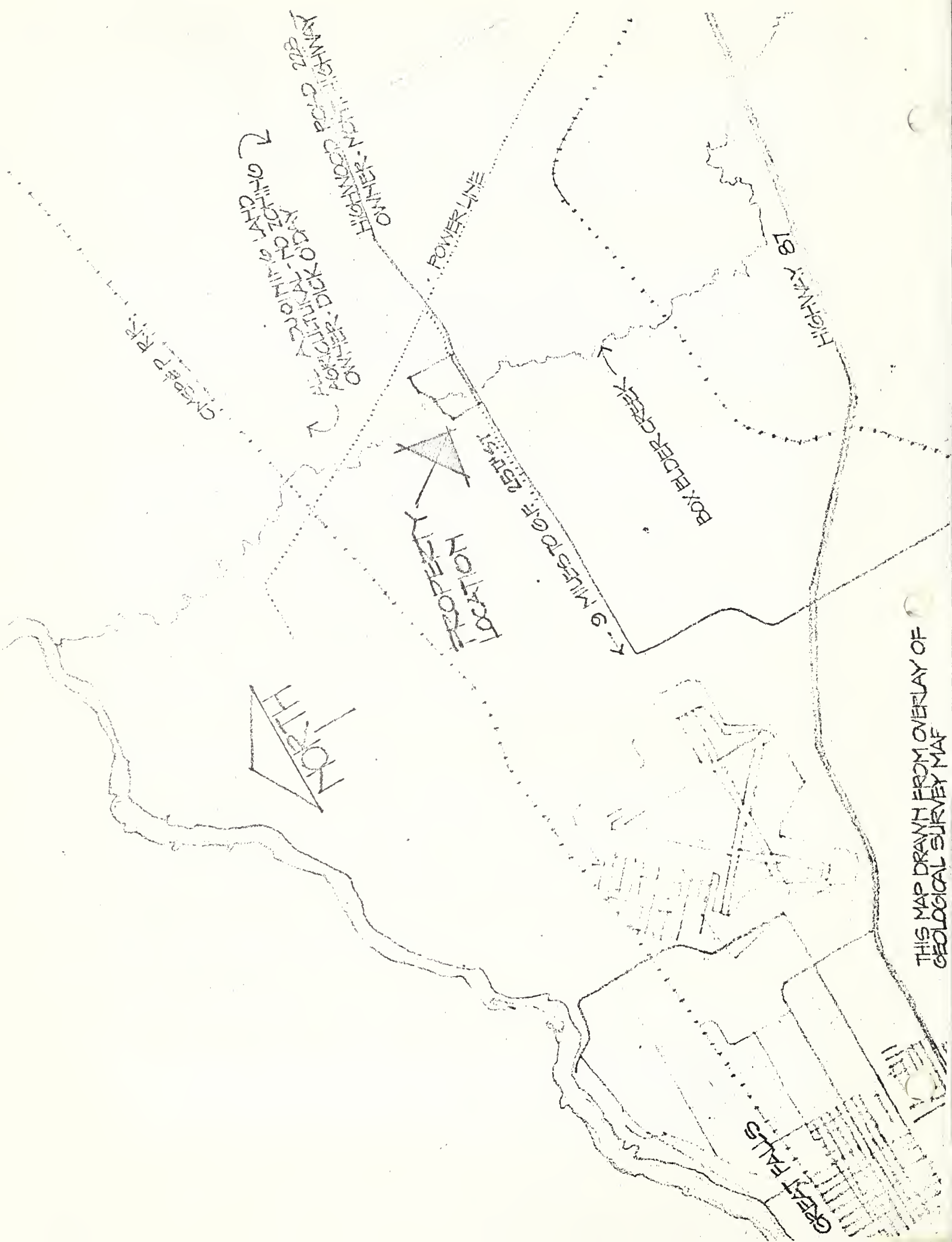
A review of all available data on this development does not indicate the need for any special conditions to be placed upon the approval of the subdivision plat. One alternative that might be preferred by some would be the installation of a community water and sewer system, but this does not seem necessary in the case of Homestake Ranch as water can be supplied and sewage disposed of without contamination of ground or surface waters.

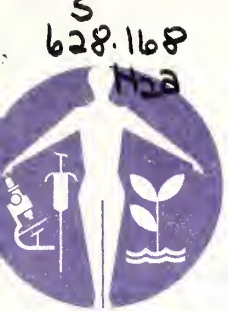
Conclusions

There does not appear to be any reason why the proposed subdivision should not be approved. The information currently available will be reviewed in light of comments received following publication of this document. If there is no substantive information received to the contrary, the plat will be approved with the understanding that the Cascade County sanitarians will inspect and approve the installation and operation of all sewer and water systems.

This document prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Water Quality Bureau from information provided by Korell & Iversen, Architects; Scott, Linnell, Neill and Newhall, Attorneys; Donald Henen, Land Surveyor; Drapes Engineering; Northern Testing Laboratories; and the City-County Health Department in Great Falls.

THIS MAP DRAWN FROM OVERLAY OF
GEOLOGICAL SURVEY MAP





Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

U.S. DOCUMENTS COLLECTION
MONTANA STATE LIBRARY

June 26, 1975

JUN 26 1975

Re: Castlewood Subdivision
Yellowstone County

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Superintendent of Public Instruction, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Yellowstone County Courthouse, Billings
City - County Planning Board, Yellowstone County Courthouse, Billings
City - County Health Department, Room 205, Courthouse, Billings
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 So. Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Assn., Rte. #1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concern Citizens for a Quality Environment, c/o Ron Erickson, Chairman, U. of M,
Missoula
Larry Uman, Environmental Studies Department, U. of M., Missoula
Student Environmental Research Center, U. of M., Room 212, Venture Center,
Missoula
Rick Graetz, Box 894, Helena
Bureau of Land Management, Federal Building, 316 North 26th St., Billings
Bureau of Reclamation, Box 2553, Billings,
Bureau of Sport Fisheries & Wildlife, 711 Central Ave., Billings
Oscar Harmon, 1804 Lake Elmo Road, Billings
Kenneth Mitchell, First Congregational Church, 310 North 27th Street, Billings
Mrs. Rita Sheehy, 1041 Poly Drive, Billings
Trout Unlimited, Box 1534, Billings
Yellowstone Development Council, Room 202 Courthouse, Billings
Northern Plains Resource Council, Stapleton Building, Billings
Christian, Spring, Sielbach & Associates, 2020 Grand Ave., Unit 3, Billings
William H. Eaton, 1112 Avenue F, Billings
Atlas Engineers, Inc., 2511 Old Hardin Road, Billings
U. S. Soil Conservation Service, P. O. Box 970, Bozeman

Enclosed is an agency impact determination that has been prepared for Castlewood Second and Third Filings, a proposed subdivision in Yellowstone County.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "D. G. Willems".

D. G. Willems, P. E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:ds

Enclosure

cc: Terry Carmody
Ben Wake

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

June 26, 1975

An Agency Impact Determination For
CASTLEWOOD SECOND AND THIRD FILINGS,
A Proposed Subdivision in Yellowstone County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b) (3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning a proposed subdivision in Yellowstone County, Montana, for which a submittal has been received requesting removal of sanitary restrictions.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

Location

Castlewood Subdivision is located in the SW $\frac{1}{4}$, Section 27, Township 1 North, Range 25 East, M.P.M., Billings, Montana (see attached area map). The First Filing - Lots 10 and 11, Block 2; Lots 6 through 26, Block 3; and Lots 1 through 7, Block 4, was filed with the County Clerk and Recorder in 1965. The sanitary restrictions were removed in 1966 and water mains have subsequently been installed and 16 of the 30 lots developed with single family homes.

The Second Filing Lots 3 through 9, Block 2, was filed in 1966. Water is provided from mains installed in the First Filing and sanitary restrictions were not removed. The Third Filing - Lots 1 through 9, Block 1 and Lots 1 through 5, Block 3, were filed in 1971. Water is provided from an existing twelve inch water main in Rimrock Road and sanitary restrictions were not removed.

Water Supply

City of Billings Municipal water mains exist within the subdivision and will serve the subdivision.

Sewage Disposal

Although the City of Billings sewer mains are only approximately 900 feet distance, the subdivision cannot connect to the municipal system due to inadequate system capacity.

Sewage would be treated in individual septic tanks and disposed through subsurface drainfields. Soil profile descriptions, percolation tests, and groundwater elevations indicate the soils are suitable for this purpose. Approximately 165 square feet of drainfield per bedroom would be required.

Solid Waste Disposal

Contract sanitation service is available with ultimate disposal in the Billings sanitary landfill.

Environmental Assessment

Development of Castlewood Subdivision began in 1965. Due to the restrictive covenants the development to date has been compatible with residential developments to the west, south and east. Since the area has been platted, filed with the Yellowstone County Clerk and Recorder and water mains installed the land use commitment has been made at the local level.

The area was used for agricultural purposes before subdividing but is not considered "prime" agricultural land. Capability units of the soils that have developed in the area range from IIIe-2 irrigated; IIIe-5 dryland to IVe-4 dryland and VIIIs-1 dryland. The subdividing process continues to alter the rural landscape and rural life style of an area to a suburban landscape and life style. In the short-term and the long-term, the land would be divided into a multiplicity of ownerships.

There would be the impacts that are common to all residential developments. Air quality would be somewhat degraded due to automobile and home heating plant emissions. There would be an irreversible and irretrievable commitment of resources in the gravel used for street construction and materials used in building construction and extension of water mains.

Alternatives Available to this Department

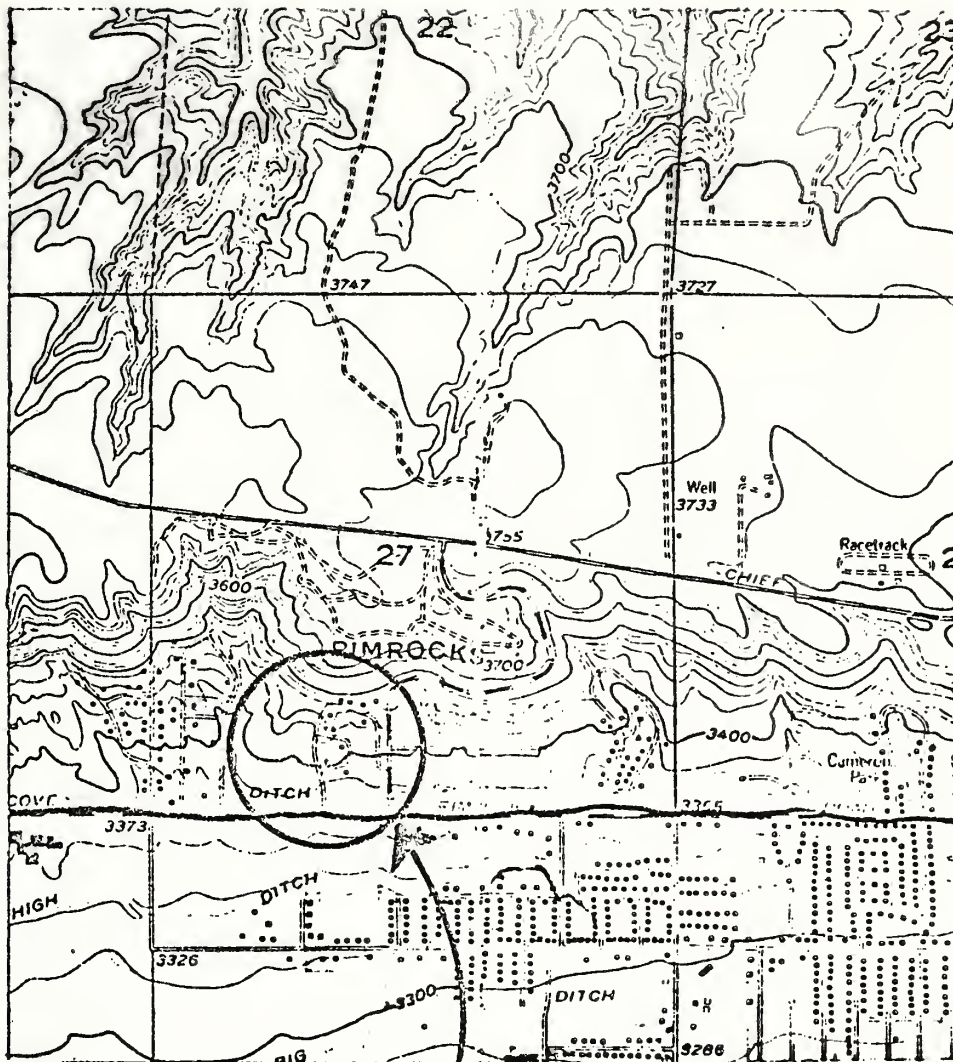
There are two basic alternatives available to this department. One is to issue a certificate of removal of sanitary restrictions; the other would be not to issue a certificate. From the data submitted, it appears that plans and specifications for the water supply system, sewage disposal systems, and solid waste disposal facilities are now in compliance with department standards and can satisfy department laws and regulations.

Conclusion

A certificate or removal of sanitary restriction will be issued ten days after issuance of this statement unless convincing response to the contrary is received by the department.

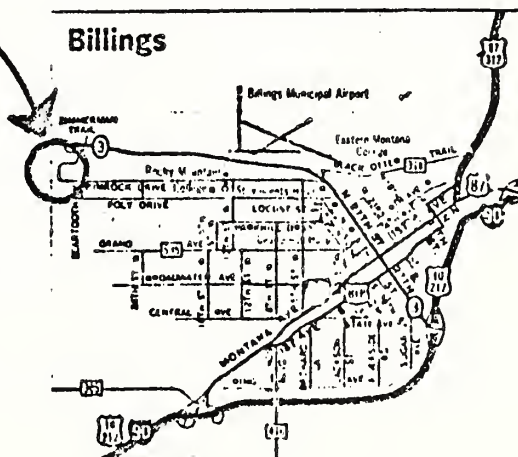
This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Water Quality Bureau, Environmental Sciences Division, utilizing information prepared by Christian, Spring, Sielbach & Associates, Atlas Engineers, Inc., and the developers.

This agency is not responsible for the accuracy of the information
contained in this report. It is the responsibility of the
Bureau of the Census, U.S. Department of Commerce, to
provide the information in this report. The information
contained in this report is for informational purposes only.

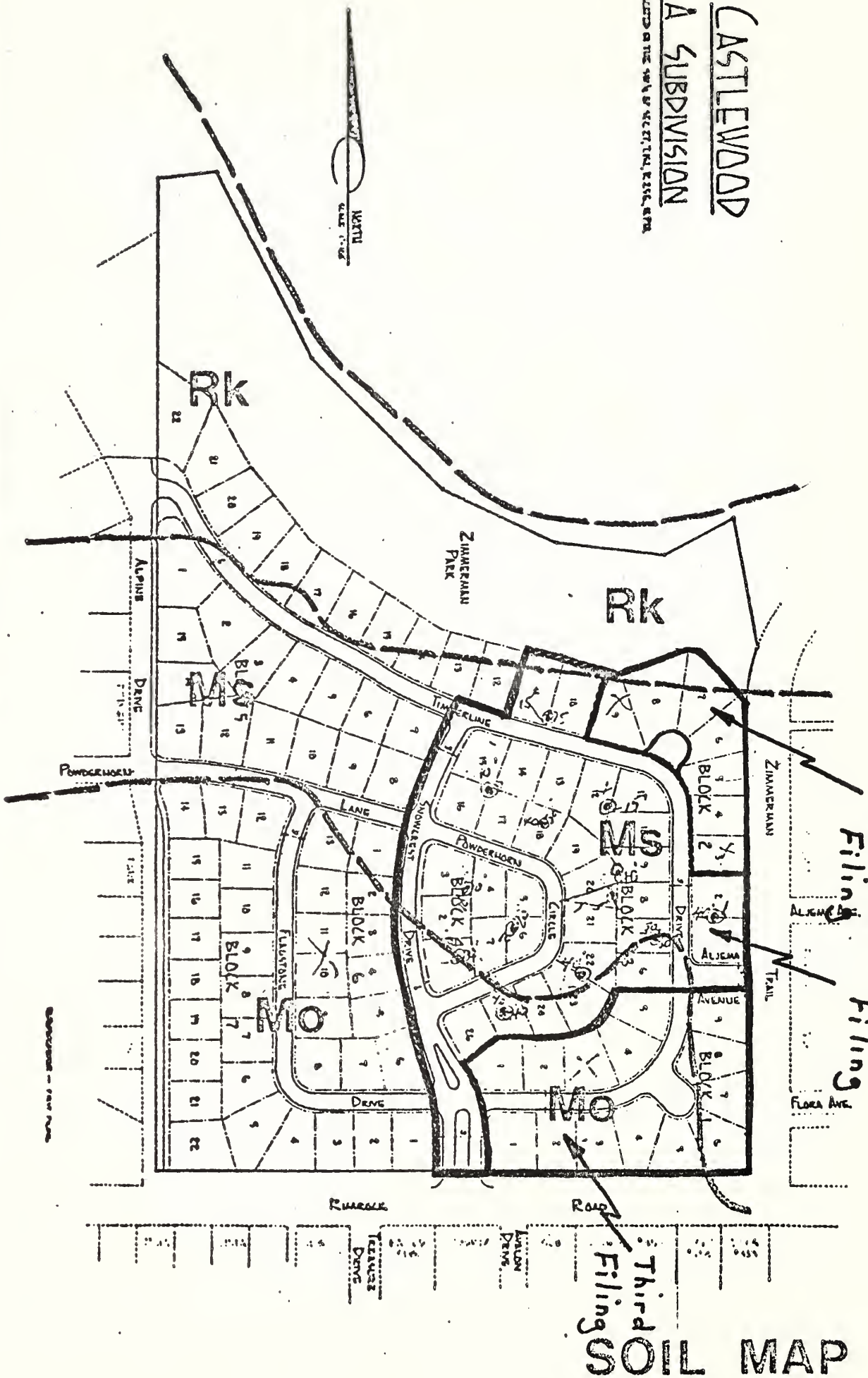


CASTLEWOOD
SUBDIVISION

AREA
MAP



LEEDS & NEAVE LTD, LEEDS, ENGLAND



Third Filing SOIL MAP

4. PLAIN BACKGROUND 5. PHOTOGRAPH 6. SIGNATURE 7. DATE	8. SEX 9. RACE 10. HEIGHT 11. WEIGHT 12. EYES 13. HAIR 14. BUILD 15. MARKS 16. TATTOOS 17. SCARS 18. OTHER	19. NAME 20. ADDRESS 21. CITY 22. STATE 23. ZIP 24. PHONE 25. FAX 26. EMAIL 27. BIRTH 28. DEATH 29. MARRIAGE 30. DIVORCE 31. OTHER	32. NAME 33. ADDRESS 34. CITY 35. STATE 36. ZIP 37. PHONE 38. FAX 39. EMAIL 40. BIRTH 41. DEATH 42. MARRIAGE 43. DIVORCE 44. OTHER	45. NAME 46. ADDRESS 47. CITY 48. STATE 49. ZIP 50. PHONE 51. FAX 52. EMAIL 53. BIRTH 54. DEATH 55. MARRIAGE 56. DIVORCE 57. OTHER	58. NAME 59. ADDRESS 60. CITY 61. STATE 62. ZIP 63. PHONE 64. FAX 65. EMAIL 66. BIRTH 67. DEATH 68. MARRIAGE 69. DIVORCE 70. OTHER	71. NAME 72. ADDRESS 73. CITY 74. STATE 75. ZIP 76. PHONE 77. FAX 78. EMAIL 79. BIRTH 80. DEATH 81. MARRIAGE 82. DIVORCE 83. OTHER	84. NAME 85. ADDRESS 86. CITY 87. STATE 88. ZIP 89. PHONE 90. FAX 91. EMAIL 92. BIRTH 93. DEATH 94. MARRIAGE 95. DIVORCE 96. OTHER	97. NAME 98. ADDRESS 99. CITY 100. STATE 101. ZIP 102. PHONE 103. FAX 104. EMAIL 105. BIRTH 106. DEATH 107. MARRIAGE 108. DIVORCE 109. OTHER	110. NAME 111. ADDRESS 112. CITY 113. STATE 114. ZIP 115. PHONE 116. FAX 117. EMAIL 118. BIRTH 119. DEATH 120. MARRIAGE 121. DIVORCE 122. OTHER
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Montana State Library
Helena
Montana 59601

WATER QUALITY BUREAU
STATE DEPT. OF HEALTH & ENV. SCIENCES
HELENA, MONTANA 59601

DEADHEAD



Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

U.S. DOCUMENTS COLLECTION
MONTANA STATE LIBRARY

Re: Orchard Acres,
Missoula County

JUN 26 1975

June 24, 1975

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena,
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning, Helena
Department of Natural Resources and Conservation, Helena
Superintendent of Public Instruction, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Missoula County Courthouse, Missoula
City - County Planning Board, Courthouse, Missoula
City-County Health Department, Room 301 Courthouse Annex, Missoula
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Assn., Route 1, Box 1410, Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State University, Bozeman
Concerned Citizens for a Quality Environment, % Ron Erickson, Chairman, U. of M.,
Missoula
Larry Uman, Environmental Studies Department, U. of M., Missoula
Student Environmental Research Center, U. of M., Room 212, Venture Center,
Missoula
Hugh Schaefer, 206 Ben Hogan Drive, Missoula
School of Forestry, U. of M., Missoula
Fern Hart, 16 Carriage Way, Missoula
U. S. Forest Service, Federal Building, Missoula
Bureau of Land Management, 1819 Holborn, Missoula
Soil Conservation Service, 2801 Russell Street, Missoula
Bill Kendall, Trout Unlimited, 715 Beverly Street, Missoula
Montana Wildlife Federation, 410 Woodworth Ave., Missoula
Ms. Jean Warren, Sierra Club - Montana Group, Box 351, Missoula
Montana Power Company, Water Department, Missoula
City of Missoula, 201 West Spruce, Missoula
Geo-Associates, Inc., 713 S. Third St. W., Missoula
Joseph W. Smith, 2026 Valley View Drive, Missoula

Enclosed is an agency impact determination that has been prepared for Orchard Acres, a proposed subdivision in Missoula County.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,



D. G. Willems, P. E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:ds

Enclosure

cc: Ben Wake

Terry Carmody

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

An Agency Impact Determination For
ORCHARD ACRES,
A Proposed Subdivision in Missoula County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b) (3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning a proposed subdivision in Missoula County, Montana, for which a submittal has been received requesting subdivision plat approval.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

Location

The proposed subdivision is located in the NW $\frac{1}{4}$, SE $\frac{1}{4}$ of Section 1, Township 12 North, Range 20 West, M.P.M. in the Cold Springs School area of Missoula County (see attached map). Thirteen lots ranging in size from 20,000 to 26,000 square feet would be developed on 7.47 acres.

Water Supply

Montana Power Company water system would serve the proposed development. Water mains have been installed in South Hills Drive and are available to serve Orchard Acres.

Sewage Disposal

Since it is not possible to serve the area with city sewer at this time, sewage would be treated in individual septic tanks and effluent disposed of through subsurface drainfields. Soil profile descriptions, percolation tests, and groundwater elevations indicate the soils are suitable for this purpose. Approximately 190 square feet of drainfield per bedroom would be required. This property does not appear to have the massive clay layers evident in the soils of the South Hills area to the east where sewage disposal problems are in evidence. Perforated standpipes installed in two of the ten foot holes has not indicated groundwater rising to this level. An irrigation ditch is to be lined with culvert.

Solid Waste Disposal

A commercial collection service is available with ultimate disposal in the Missoula Sanitary Landfill.

Other Services

Electricity and natural gas would be provided by the Montana Power Company and telephone service by Mountain Bell. Fire protection would be provided by the Missoula Rural Fire Department and the police protection by the Missoula County Sherriff's Department. The nearby Cold Springs Elementary School would provide educational services to the grade school children and High School students would attend Missoula Sentinel High School.

Taxation

Present tax revenue generated by the 7.47 acres is \$450 per year. Projected taxes after home construction and improvements have been completed are \$1,065 per lot or \$13,845 total projected taxes.

Environmental Assessment

The subject property has been used as pasture in the recent past, and the primary impacts would be those associated with conversion of agricultural land to residential. However, with close proximity to the City of Missoula and the residential land use of adjacent properties, the long term commitment of residential development on this property is evident.

The subdividing process continues to alter the rural landscape and life style. In the short-term and long-term the land would be divided into a multiplicity of owner-ships.

Irreversible & Irretrievable Commitment of Resources

The primary commitment of resources would be the irreversible and irretrievable commitment of 7.47 acres of pasture land to residential lots. Building materials that go into housing construction would be irretrievable although these houses would be constructed on other properties if not on Orchard Acres.

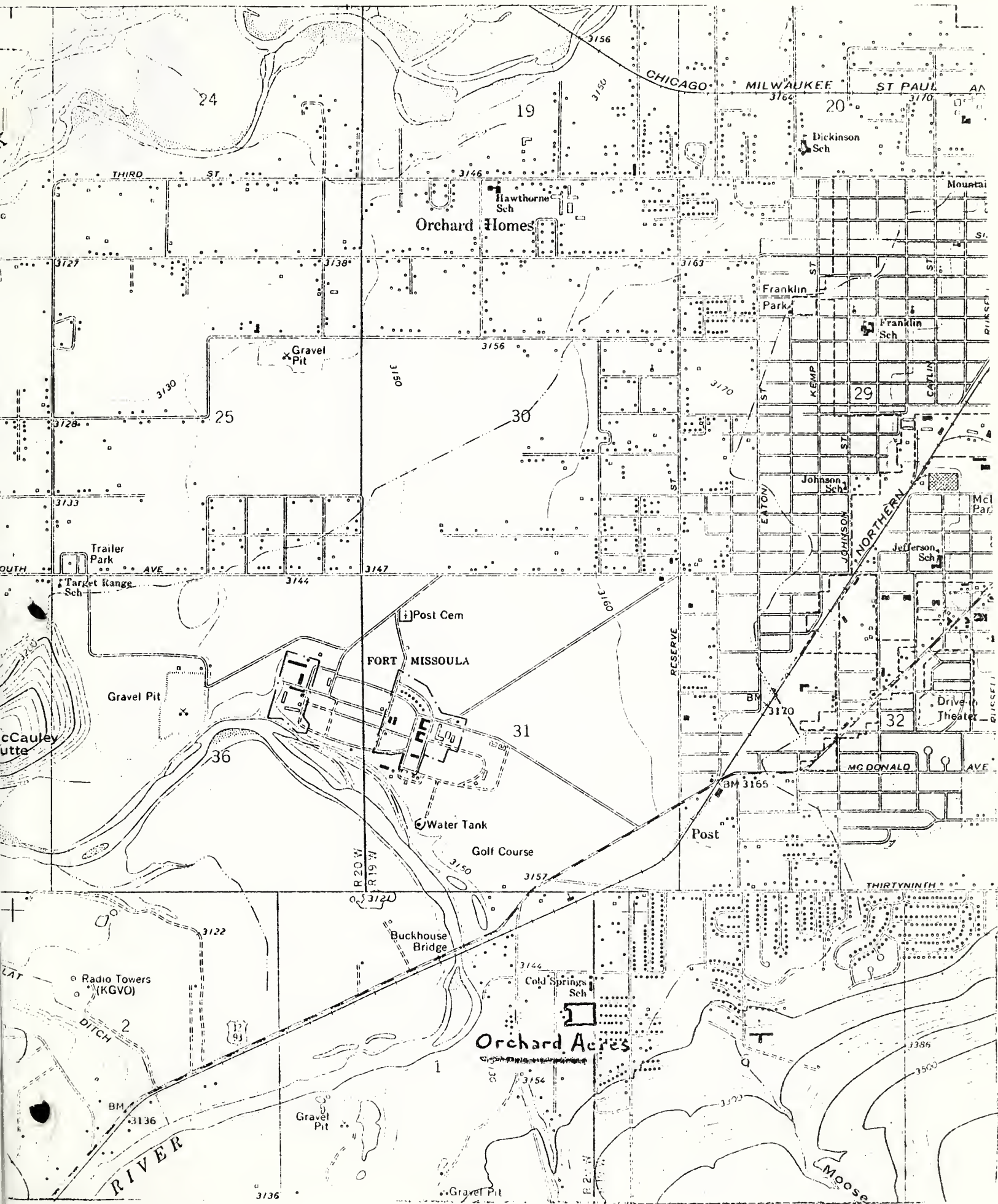
Alternatives Available to this Department

There are two basic alternatives available to this department. One is to issue a certificate the other would be not to issue a certificate. From the data submitted, it appears that plans and specifications for the individual water supply systems, sewage disposal systems, and solid waste disposal facilities are now in compliance with department standards and can satisfy department laws and regulations.

Conclusion

A certificate of removal of sanitary restriction will be issued ten days after issuance of this statement unless convincing response to the contrary is received by the department.

This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Water Quality Bureau, Environmental Sciences Division, utilizing information prepared by Geo-Associates, Inc., Eli and Associates and the developer.



628.168

H12a

MAR 27 1975



Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

March 28, 1975

STATE DOCUMENTS

Honorable Thomas Judge, Governor, State of Montana, Helena
Howard L. Huffman and Paul K. Dudley, Box 1068, Bozeman
City-County Planning Board, Courthouse, Bozeman
City-County Health Department, Box 639, Bozeman
Board of County Commissioners, Bozeman
Gallatin County Attorney, Courthouse, Bozeman
Jim DeWolfe, Bozeman Chronicle, Bozeman
Brelsford & Associates, Box 1252, Bozeman
Department of Intergovernmental Relations, Division of Planning,
Helena

Department of State Lands, Helena

Department of Natural Resources and Conservation, Helena

Department of Highways, Helena

Rick Graetz, Box 894, Helena

Perry Nelson, Gallatin Sportsmen's Association, 526 North
Bozeman Avenue, Bozeman

Louis Moos, Sacajawea Audubon Society, 712 South 13 Avenue,
Bozeman

Mary Lee Reese, 29 South Alta, Helena

Dr. Richard C. Ritter, Box 1170, Bozeman

Department of Fish and Game, Helena (3 copies)

Gallatin National Forest, Federal Building, Bozeman

Charles Bradley, 1105 South Tracy, Bozeman

Northern Rockies Action Group, #9 Placer Street, Helena

Environmental Quality Council, Helena (2 copies)

Ken Porter, 502 South Grand, Bozeman

Student Environmental Research Center, Room 212 Venture Center,
University of Montana, Missoula

Montana State Library, Helena (6 copies)

Doris Milner, Montana Wilderness Association, Route 1, Box 1410,
Hamilton

Bozeman Public Library, Bozeman

Environmental Studies Department, University of Montana, Missoula

Citizens Advocate, Capitol, Helena

Rick Applegate, Box 931, Bozeman

Dorothy Bradley, Capitol, Helena

Joe Sabol, Attorney, 27 North Tracy, Bozeman

Elizabeth Smith, 2311 Highland Court, Bozeman

Microbiology Department, Montana State University, Bozeman

Environmental Information Center, Box 12, Helena (2 copies)

Paul T. Richards, 902 North Park, Helena

MONTANA STATE LIBRARY
930 East Lyndale Avenue
Helena, Montana 59601

C. W. Gonder, 823 East Call Street, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Institute of Applied Research, 309 Hamilton Hall, Montana
State University, Bozeman
Dan Smith, Citizens Alert for Guided Growth, 812 South Eighth,
Bozeman
F. E. Suhr, 501 West Peach, Bozeman
County School Superintendent, Courthouse, Bozeman
County Sheriff, Courthouse, Bozeman

Enclosed is an agency impact determination that has been prepared for Eastedge Meadows, a proposed subdivision near Bozeman, Montana, in Gallatin County. This document is being submitted for your information and comments.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of the water supply, sewage disposal, and solid waste disposal systems. This declaration defines the project and specifies those conditions under which the subdivision will receive approval without development of an environmental impact statement. This declaration is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,



D. G. Willems, P.E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:sh

Enclosure

cc: Terry Carmody
Ben Wake
Dan Vichorek

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

March 28, 1975

An Agency Impact Determination
Eastedge Meadows
a proposed subdivision in Gallatin County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6405 (b)(3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning Eastedge Meadows, a proposed subdivision in Gallatin County, Montana, for which a submittal has been received requesting subdivision plat approval.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for 15 days.

This proposed development is located less than one mile from Bozeman, Montana, in the SE 1/4 of Section 8 and the NE 1/4 of Section 17, Township 2 South, Range 6 East, MPM. Interstate 90 right-of-way borders the property on the north and Haggarty Lane Frontage Road on the south. A total of 17.78 acres would be divided into 12 lots ranging in size from 1.004 acres to 1.714 acres. The proposed subdivision is designed for permanent single-family residences.

Water Supply

Water would be supplied by an individual drilled well on each lot. Well logs on adjacent property indicate water yields of 12 to 20 gallons per minute can be obtained at depths of approximately 100 feet.

Sewage Disposal

Sewage would be treated in individual septic tanks and disposal through subsurface drainfields. Soil profile descriptions, percolation tests, and groundwater data indicate the lots are suitable for this purpose. Slopes of the drainfield sites range up to five percent.

Solid Waste Disposal

It is proposed that Suhr hauling of Bozeman would collect the solid waste and dispose of it in the city of Bozeman sanitary landfill.

Environmental Assessment

The primary environmental impacts would be those associated with conversion of agricultural land to residential use. However, this property occupies a strip of land between an interstate highway and a frontage road where residential development has already occurred. The close proximity to the city of Bozeman of this property and previous residential development of adjacent parcels preclude any long-term use of this land for anything but residential development.

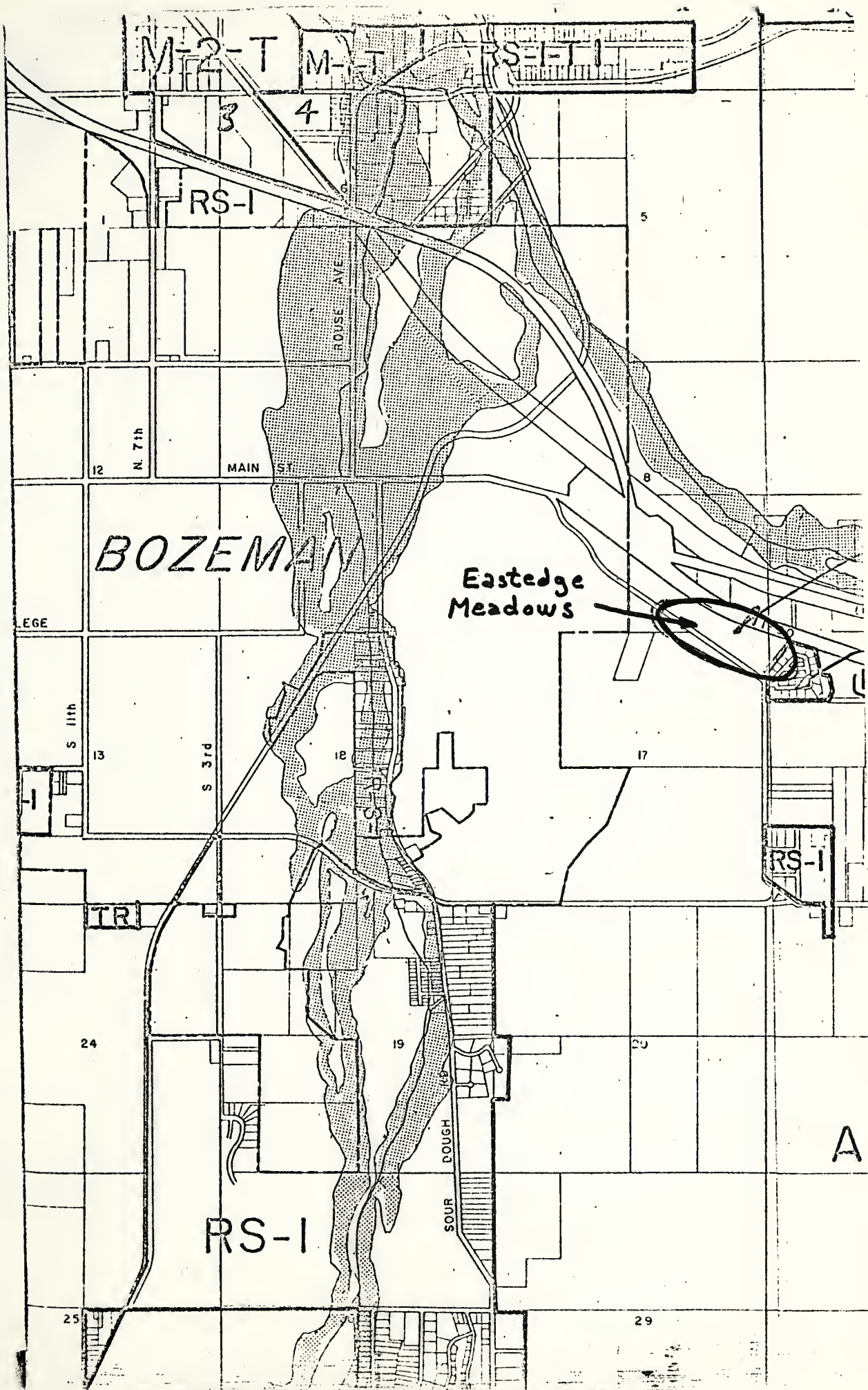
Alternatives Available to this Department

There are two basic alternatives available to this department with respect to this development. They are to issue a certificate of subdivision plat approval or not to issue a certificate. From the data submitted, it appears that plans and specifications for the individual water supply systems, sewage disposal systems, and solid waste disposal facilities are now in compliance with department standards and can satisfy department laws and regulations.

Conclusion

A certificate of subdivision plat approval will be issued by this department 15 days after issuance of this determination for this department's action is considered not significant.

This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Water Quality Bureau, from information submitted by Brelsford & Associates, the city of Bozeman, Louis Tout, City of Bozeman Zoning Commissioner, and the developer.







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628.168
H2a

Department of Health and Environmental Sciences
STATE OF MONTANA HELENA, MONTANA 59601

W-1
MAR 27 1975

John S. Anderson M.D.
DIRECTOR

March 28, 1975

STATE DOCUMENTS

Honorable Thomas Judge, Governor, State of Montana, Helena
Mr. Mel Palin, Box 156, Drummond
Microbiology Department, Montana State University, Bozeman
Citizens Advocate, Capitol, Helena
Environmental Quality Council, Helena (2 copies)
Fish and Game Department, Helena (3 copies)
Department of Intergovernmental Relations, Division of Planning,
Helena
Montana State Library, Helena (6 copies)
Mr. John D. Peterson, Sanitarian, Courthouse, Anaconda
J. P. Cunningham, M.D., County Health Officer, Box 40, Philipsburg
Environmental Information Center, Box 12, Helena (2 copies)
Mr. Paul T. Richards, 902 North Park, Helena
Student Environmental Research Center, Room 212 Venture Center,
University of Montana, Missoula
Department of Natural Resources and Conservation, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Northern Rockies Action Group, #9 Placer Street, Helena
Ms. Doris Milner, Montana Wilderness Association, Route 1,
Box 1410, Hamilton
Environmental Studies Department, University of Montana,
Missoula
Mr. Hugh Schaefer, 206 Ben Hogan Drive, Missoula
Mr. Sylvan Lutey, City-County Planning Board, Courthouse,
Philipsburg
Mayor, Town of Drummond
Department of State Lands, Helena
Department of Highways, Helena
Mary Lee Reese, 29 South Alta, Helena

Enclosed is an agency impact determination that has been prepared
for Wild Horse Meadows, a proposed subdivision in Granite County.

Subdivision plans and specifications have been submitted to
the Department of Health and Environmental Sciences for
approval of water supply, sewage disposal, and solid waste
disposal systems.

MONTANA STATE LIBRARY
230 East Lyndale Avenue
Helena, Montana 59601

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,



D. G. Willems, P.E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:sh

Enclosure`

cc: Ben Wake
Terry Carmody
Dan Vichorek

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

March 28, 1975

An Agency Impact Determination
for
Wild Horse Meadows,
a proposed subdivision in Granite County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6405 (b) (3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning Wild Horse Meadows, a proposed subdivision in Granite County, Montana, for which a submittal has been received requesting subdivision plat approval.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for 15 days.

Location

The proposed subdivision is located approximately 11 miles west of Drummond and about a mile up to Bear Creek Road. It occupies a portion of the Elfer Placer Mineral Survey No. 3271 located in Section 10 and 11, Township 11 North, Range 14 West, MPM. The subdivision consists of 27.8 acres would be divided into 17 lots of one acre or more. It is anticipated that the subdivision would be used for cabin sites.

Water Supply

Individual wells would be used as a water supply. Two wells have been drilled on the property and indicate a sufficient supply of water. Laboratory tests of the well water show it to be biologically safe for human consumption and of good chemical quality.

Sewage Disposal

Sewage would be treated in individual septic tanks and disposed of through subsurface drainfields. Soil profile descriptions, percolation tests and groundwater elevations indicate the soils are suitable for this purpose.

Solid Waste Disposal

It is proposed that Skagg's Disposal Service will collect solid waste. Disposal was to have been in the Drummond landfill. However, the Drummond landfill is severely limited with respect to future capacity. The town of Drummond is presently considering several possibilities to alleviate the solid waste disposal problem:

- (a) Purchase additional land for extension of the existing site.
- (b) Form a lower valley disposal district.
- (c) Have solid waste transported to an out-of-county site.

In any case, the problem must be resolved before the department could issue a certificate. A solution is expected in the near future.

Services

Ambulance service is available in Drummond, and hospital service is available in Philipsburg, Deer Lodge, and Missoula.

Environmental Assessment

Since this property is not agriculturally productive in nature or a key wildlife area, the usual environmental impacts associated with the residential subdivision of land will be minimized. Restrictive covenants relating to construction will aid in reducing visual impacts. At full development and 1.5 vehicles per unit and a use factor of four trips per day per unit, approximately 100 vehicle trips per day would be generated. Most vehicles would travel in the direction of Drummond or Missoula and would use old U. S. Highway 10 or Interstate 90 and the county road up to Bear Creek.

The location of the proposed subdivision and the economic climate of the area dictate that most potential residences would be seasonal, therefore, creating little direct effect on the school system.

Since the 27.8 acres is presently taxed as placer mining property, little tax revenue is generated. After reclassification as subdivided land, tax revenue will increase many-fold.

The primary non-mitigable adverse effect on the proposed development would be the irreversible and irretrievable commitment of natural resources in the form of materials, energy, and water in the construction and use of second homes.

Alternatives Available to the Developer

One alternative always available is to leave the land in its present state and use. At present, it is a placer mining property that is not productive for agriculture, timber, or key wildlife habitat.

Another alternative would be to lessen the lot density of the development and lessen the adverse impacts of the present plan.

Alternatives Available to the Department

There are two basic alternatives available to the department. They are to issue a certificate of subdivision plat approval or not to issue a certificate. From the data submitted, it appears that plans and specifications for the individual sewage disposal systems and water supply systems are now in compliance with department standards and can satisfy department laws and regulations. When the question of where the refuse hauler can dispose of solid waste material is resolved, then plans for solid waste disposal will be in compliance with department standards.

Conclusion

A certificate of subdivision plat approval can be issued when the problems associated with solid waste disposal are resolved.

This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Water Quality Bureau, from information supplied by Eli & Associates, town of Drummond, and the developer.

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Department of Health and Environmental Sciences

STATE OF MONTANA HELENA, MONTANA 59601

John S. Anderson M.D.
DIRECTOR

MAY 12 1975 STATE DOCUMENTS

May 13, 1975

MAY 13 1975

Re: Montana Meadows, Blocks 1,
2, and 3, Yellowstone County

Honorable Thomas Judge, Governor, State of Montana, Helena
Citizens Advocate, Helena, Montana
Environmental Quality Council, Helena
Montana Fish and Game Department, Helena
Department of Highways, Helena
Department of Intergovernmental Relations, Division of Planning,
Helena
Department of Natural Resources and Conservation, Helena
Superintendent of Public Instruction, Helena
Department of State Lands, Helena
Montana State Library, Helena
Board of County Commissioners, Courthouse, Billings
City-County Planning Board, Courthouse, Billings
City-County Health Department, Courthouse, Billings
Environmental Information Center, Box 12, Helena
C. W. Gonder, 823 East Call Street, Livingston
Mrs. Vel Jansen, 430 South Sixth, Livingston
Mrs. Winifred Lucky, 420 South Sixth, Livingston
Mary Lee Reese, League of Women Voters, 29 South Alta, Helena
Doris Milner, Montana Wilderness Association, Route 1, Box 1410,
Hamilton
Northern Rockies Action Group, #9 Placer Street, Helena
Paul T. Richards, 902 North Park, Helena
John Schillinger, Microbiology Department, Montana State Uni-
versity, Bozeman
Concerned Citizens for a Quality Environment, c/o Ron Erickson,
University of Montana, Missoula
Larry Uman, Environmental Studies Department, University of
Montana, Missoula
Student Environmental Research Center, Room 212, Venture Center,
University of Montana, Missoula
Beartooth View Ranch, 706 Main, Billings
Bureau of Land Management, Federal Building, 316 North 26th
Street, Billings
Bureau of Reclamation, Box 2553, Billings
Bureau of Sport Fisheries & Wildlife, 711 Central Avenue,
Billings
Oscar Harmon, 1804 Lake Elmo Road, Billings
Mrs. Rita Sheehy, 1041 Poly Drive, Billings
Trout Unlimited, Box 1534, Billings
Yellowstone Development Council, Courthouse, Billings
Alf Hulteng, Branch Office, Box 20296, Billings

MONTANA STATE LIBRARY
930 East Lyndale Avenue
Helena, Montana 59601

Enclosed is an agency impact determination that has been prepared for Blocks 1, 2, and 3 of Montana Meadows, a proposed subdivision in Yellowstone County.

Subdivision plans and specifications have been submitted to the Department of Health and Environmental Sciences for approval of water supply, sewage disposal, and solid waste disposal systems.

This determination defines the project and specifies those conditions under which the subdivision will receive approval without the development of an environmental impact statement. This determination is intended to assure all interested governmental agencies and public groups that this approval is being sought within the intent of both the Montana Environmental Policy Act and the Montana subdivision laws.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "D. G. Willems", with a long horizontal flourish extending to the right.

D. G. Willems, P.E., Chief
Water Quality Bureau
Environmental Sciences Division

DGW:APK:sh

Enclosure

cc: Ben Wake
Terry Carmody
Dan Vichorek

MONTANA DEPARTMENT OF HEALTH
AND
ENVIRONMENTAL SCIENCES

May 13, 1975

An Agency Impact Determination For

MONTANA MEADOWS, BLOCKS 1, 2, AND 3,
A Proposed Subdivision in Yellowstone County, Montana

Pursuant to the Montana Environmental Policy Act, Section 69-6504 (b) (3); the act controlling both public and private water supply and sewage disposal for subdivisions, Section 69-5001 through 69-5009; and the act to control water pollution, Section 69-4801 through 69-4827, the following agency impact determination is prepared by the Department of Health and Environmental Sciences, Environmental Sciences Division, Water Quality Bureau, concerning a proposed subdivision in Yellowstone County, Montana, for which a submittal has been received requesting removal of sanitary restrictions.

The purpose of this agency impact determination is to inform all interested governmental agencies and the concerned public of the Water Quality Bureau's intent not to prepare a full environmental impact statement. This document will be circulated for ten days.

Location

The proposed subdivision is located approximately one mile east of Laurel near the Mossmain wye. It occupies the SE 1/4 of Section 2, Township 2 South, Range 24 East, MPM. Montana Meadows, which was platted and filed in June of 1973, encompasses the entire 160-acre quarter section. However, application has been received for removal of sanitary restriction on Blocks 1, 2, and 3 only. They comprise of 35 acres divided into 61 lots in the southern portion of the development (see attached plat).

Water Supply

Individuals wells would be used as a water supply. Two wells exist on the property--one on Lot 26 Block 2 (40 feet deep) and one on Lot 4 Block 5 (75 feet deep). Results of laboratory tests indicate the water is bacteriologically suitable for drinking and domestic use.

Sewage Disposal

Sewage would be treated in individual septic tanks and disposed through subsurface drainfields. Soil profile descriptions,

percolation tests, and groundwater elevations indicate the soils are suitable for this purpose. Approximately 165 square feet of drainfield per bedroom would be required.

Solid Waste Disposal

It is proposed that Tim's Enterprises will collect solid waste. Ultimate disposal would be in the Billings sanitary landfill.

Environmental Assessment

The subject property has been used for irrigated farm land, and the primary environmental impacts would be those associated with conversion of agricultural land to residential use. However, the development has received planning board approval, the area platted, and the plat filed with the county clerk and recorder. Therefore, the land use commitment was made in 1973 at the local level. The area to the south of the subdivision is occupied by the Burlington Northern rail yards.

The subdividing process continues to alter the rural landscape and rural life style of an area to a suburban landscape and life style. In the short-term and the long-term, the land would be divided into a multiplicity of ownerships.

Alternatives Available to this Department

There are two basic alternatives available to this department. One is to issue a certificate of removal of sanitary restrictions; the other would be not to issue a certificate. From the data submitted, it appears that plans and specifications for the individual water supply systems, sewage disposal systems, and solid waste disposal facilities are now in compliance with department standards and can satisfy department laws and regulations.

Conclusion

A certificate of removal of sanitary restriction will be issued ten days after issuance of this statement unless convincing response to the contrary is received by the department.

This agency impact determination has been prepared by Alfred P. Keppner, B.S.F., M.S., Soils Scientist, Water Quality Bureau, Department of Health, utilizing information presented by Warren Satterlee, P.E., Harlan Lund, P.E., the county sanitarian, the developer, and Yapuncich, Sanderson & Brown Laboratories.

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MONTANA MEADOWS

SHEET A

(A SUBDIVISION) in
SE⁴ Sec. 2, T.2S., R.24E., P.M.M.

Yellowstone County, Montana

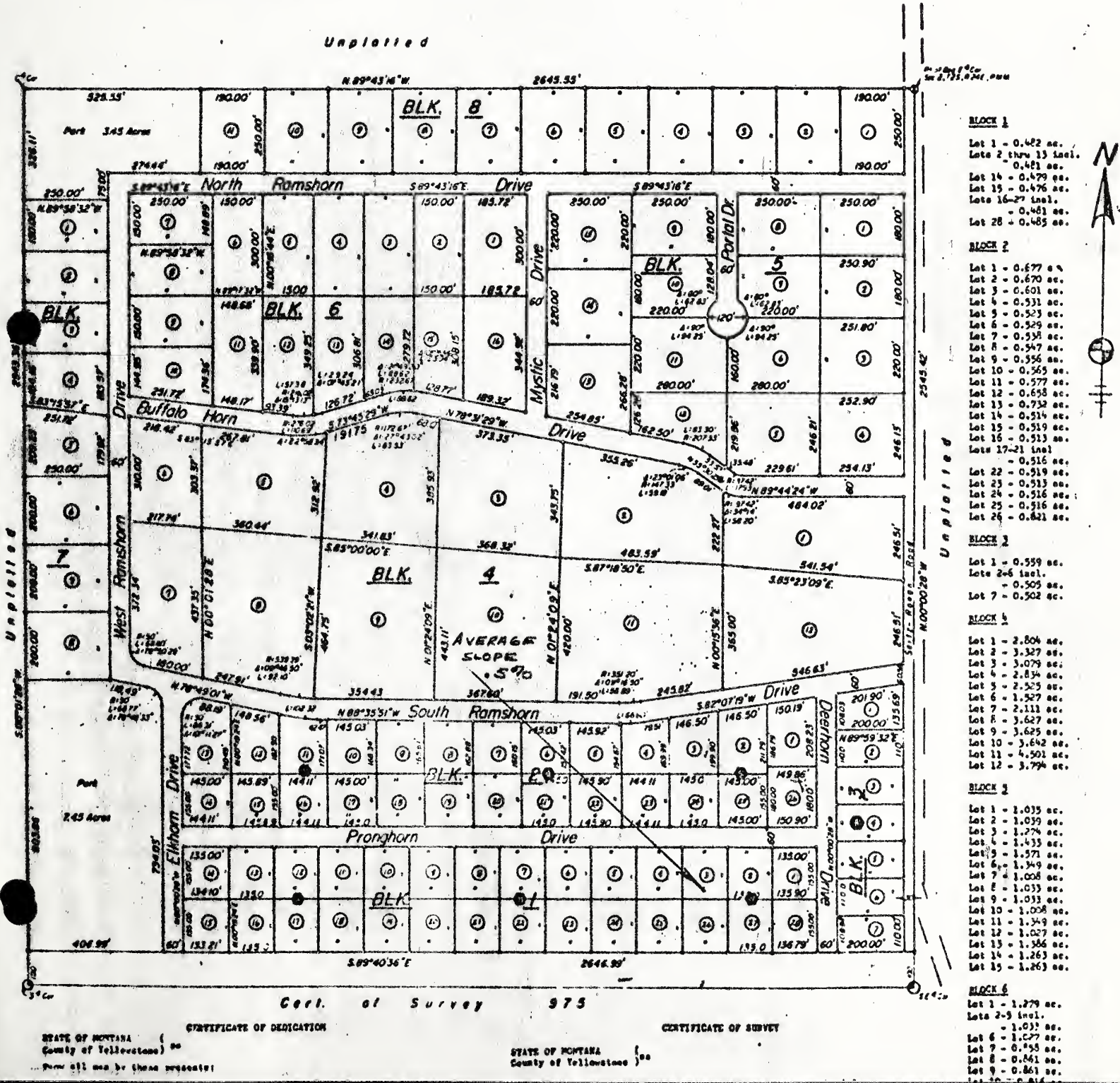
by: Harlan M. Lund 1827S

Scale: 1"=200' June, 1973

● DENOTES SOIL PROFILE LOCATIONS

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ADDITIONAL INFORMATION
 (PLEASE PRINT)

